The Effects of Pre-Teaching Vocabulary on Vocabulary Usage, Comprehension, and Academic Achievement in a Secondary Social Studies Classroom

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Statement of the Problem

As a high school Social Studies teacher at a Title I campus, I have witnessed many problems in the classroom, from students who read below their grade level to teacher-centered instruction to low motivation among the students. While teaching students in elementary, middle and high school grade levels, I realized that the students often did not understand the words that I was saying during instruction. When they read test questions, they did not comprehend the meaning of the question, nor the answer choices. In content-heavy subjects, like Social Studies, students without extensive vocabulary struggle to keep up with the material and answer questions on assessments (Harmon & Hedrick, 2000; Treiman, Clifton, Meyer, & Wurm, 2003). They become disengaged when they do not understand the content, do not participate during discussion, and ultimately, do not learn what they are supposed to learn (Christ & Wang, 2010). This adversely affects their ability to pass high-stakes standardized tests. In my classroom, defining a new word for students during a unit did not seem to help the students either. Unless they had previous knowledge to which they could link the word, teaching students a word’s definition at the moment they encountered the word was not enough for the students to master the content (Newton, Padak, & Radinski, 2008). Thus, the students seem to be lacking the vocabulary needed to understand and master the instruction, as well as enhance their verbal communication.

At the national level, students across the United States seem to be struggling with reading. For example, a 2015 report from the National Assessment of Educational Progress indicates that 28% of twelfth graders are reading below a basic reading level and 35% of twelfth graders are reading at a basic reading level; only 37% of twelfth graders are reading at proficient or advanced levels (NCES, 2015). Clearly, there is an issue with education, if over sixty percent
of our graduating high schoolers are reading at a level no higher than basic. Similarly, the NAEP has identified weaknesses in Social Studies instruction. Nearly half of twelfth grade students in 2010 were performing at basic level for United State History (NCES, 2011). The average student has not even reached proficient levels of understanding, applying, and evaluating content from American history. Furthermore, 38% of the 8th grade students in Texas did not earn the minimum passing score on the Social Studies STAAR, which covers United States History, in May 2017 (TEA, 2017). Clearly, something is missing in the classroom, if students across the country and state are struggling to read, understand concepts, and apply them. Could it be that the students do not understand the wording and language of the test questions or answer choices? Before even taking the test, were students able to comprehend the content during instruction?

While clearly there is a problem with reading and test scores in Social Studies classrooms, vocabulary instruction might be the answer to improving reading comprehension and academic achievement in those classrooms. Visual displays, including graphic organizers, various types of multimedia, word clouds, and concept maps, have been known to help support vocabulary instruction in elementary school classrooms (McKenzie, 2014). In a Social Studies class, vocabulary instruction needs to be elaborative. Students should be connecting the vocabulary words to prior knowledge, working with partners, using the words in context, and comparing and contrasting the words (Alexander-Shea, 2011) for the instruction to be effective. Instead of memorizing a definition or learning a word in isolation, students should connect words to their previous experiences and other content topics, give examples of the words, and understand how they fit into the content topics. These elaborative, engaging vocabulary strategies were used in a fourth grade Social Studies classroom, and the students demonstrated increased vocabulary comprehension and content retention at the end of the six-week study
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(Graham, Graham, & West, 2015). The Frayer Model, in particular, was used to teach math vocabulary words, such as “ratio” and “perimeter” to high school students in Kenya. The students in the experimental group defined the vocabulary words, listed characteristics about the word, and gave examples and non-examples. On the unit test, these students outperformed the students in the control group who were only presented with the definitions of the vocabulary words (Wanjiru & O-Conner, 2015). Additional studies have revealed that the rational cloze, or gap-filling, passages are effective ways for students to practice using vocabulary; after being pre-taught vocabulary in a 9th grade science class and using the rational cloze strategy, students demonstrated knowledge of the content vocabulary and mastery of the content objectives on delayed posttests (Lee, 2010).

Despite the struggles that high school Social Studies teachers seem to encounter with the performance of their students, pre-teaching vocabulary using elaborative, meaningful strategies could help with the students’ comprehension and performance. Currently, there is limited research on both pre-teaching vocabulary in Social Studies classes and the effects of the instruction on the students’ vocabulary usage in their verbal communications.

Purpose of the Study

Because I teach United States History to students who are below grade level, I want to help the students to (1) understand the academic and content vocabulary in class, (2) use the vocabulary words correctly in their conversations and in class discussions, (3) better understand the content of the unit because of the pre-teaching, and (4) ultimately, increase their test scores on the standardized test. I believe that pre-teaching vocabulary can help reach these goals, but I would need to conduct research to determine if this is true. The purpose of this study is to identify whether pre-teaching academic and content vocabulary to high school students improves
their comprehension, usage, and mastery of the objectives. My hypothesis is that pre-teaching vocabulary to students increases their vocabulary usage, comprehension, and academic achievement in a high school Social Studies classroom.

Significance of the Study for Practice

During my first year teaching elementary school, a colleague suggested that I pre-teach the vocabulary words to the students each unit using a four-square grid. Using this strategy seemed to help my young students answer questions in class, read text passages and assessment questions on tests, and understand the content topics. The pre-teaching established background knowledge for them. They finally had schema to which they could connect the content. Once I began teaching middle and high school students, the pre-teaching continued to help my students engage with the content, participate in discussions, and earn passing and commended scores on their standardized test.

If this research proves my hypothesis to be correct, educators in content-heavy subjects, such as science and social studies, can use the pre-teaching vocabulary strategy to enhance their instruction. By selecting vocabulary words to pre-teach that the instructors expect to use within a content unit, the teacher can support the discussions and critical thinking of the students. The pre-teaching helps with recall and basic application. Once the students have mastered that, then the students can reach the higher thinking levels, with scaffolded support from the instructor. During the discussions, students will be using vocabulary words in their speech that they might not have previously used. The strategy could also help the instructors lose less instructional time. For example, the teacher might find that less time is needed to explain a concept, because the students understand the vocabulary words that fit with the concept. Additionally, the teacher
might not need to redirect or prompt the students into participating in discussions, because the students already have the language needed to answer and pose questions.

In terms of academic achievement, pre-teaching vocabulary could increase the student’s comprehension of a content topic and better understand the unit as a whole. It stands to reason that with increased comprehension, students’ scores on end of unit assessments and standardized tests will increase.

Significance of the Study for Theory

The theoretical significance of this study is that the results could help support student motivation theories. According to Schug (1982), many students do not like Social Studies classes, because there is little engagement, the content is boring, and it is difficult to feel like one has mastered the objectives. Thus, students lack motivation to succeed in Social Studies. With pre-teaching vocabulary, teachers engage the students in learning and help to build competence in the students. Rather than listen to a lecture where the students not only are not a part of the conversation, but also cannot comprehend the words that the instructor is using, students are supported in their use of the words and feel that they are capable of using them in conversations. If students feel competent, as well as autonomous in their learning and have relatedness with the instructor, then they are likely to have more internalized levels of extrinsic motivation to do well in their Social Studies class (Ryan & Deci, 2000).

Method

Participants

The researchers will randomly select a local high school that serves a diverse range of students with varied socioeconomic backgrounds. Within the school, the US History teachers will be selected to deliver instruction to their US History students. These students will be the
participants in the study and are expected to be between the ages of sixteen to seventeen. In the future, it would be interesting to conduct a longitudinal study of pre-teaching vocabulary to high school Social Studies students across their four years of high school to determine how the strategy impacts overall academic achievement in Social Studies. In that case, all Social Studies high school students would be participants, and probably several high schools would need to be randomly selected for participation. However for the scope of this preliminary study a smaller sample will be used.

It is expected that there would be four to eight US History teachers at the school that would deliver instruction to roughly six sections of students each. To prevent bias, half of each teacher’s sections would be randomly assigned to receive the pre-teaching vocabulary instruction, and the other half would receive the standard curriculum that does not include a pre-teaching vocabulary strategy. Because demographic and academic achievement information on the students would likely be collected, consent would need to be obtained from the participants’ parents.

Procedures

This study will be conducted for the duration of the academic school year. It is expected that there will be approximately three units per quarter, for a total of twelve units in US History. For a teacher’s treatment sections, the instruction at the beginning of each unit will be based on the pre-teaching strategy, and the teacher will spend two forty-five minute periods pre-teaching the vocabulary. For the control sections, no vocabulary strategy will be used; instruction will carry on, per the curriculum, without a pre-teaching vocabulary component.

For the vocabulary pre-teaching, researchers will select eighteen to twenty-four academic and content vocabulary words that are pertinent to the unit (for example, the Progressive Era unit
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will contain the words “muckraker,” “temperance,” “inflation,” “initiative,” “circumvent,” and “regulate”). Approximately three to five vocab words should be actively used by both the teacher and students in each lesson within the unit. Students will receive grids, with each vocabulary word typed into the grids, and spaces to record the definition, picture, and sentence. The grid is similar to the Frayer Model, as shown below:

<table>
<thead>
<tr>
<th>Word:</th>
<th>Definition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td></td>
</tr>
<tr>
<td>Picture:</td>
<td>Sentence:</td>
</tr>
</tbody>
</table>

The teacher will model how to complete the Frayer model for two sample words by filling out the grid on the board, engaging in a verbal “think aloud” to make connections to the word, giving examples, or telling an elaborative story. For example, the teacher might define inflation as “the decline in the value of money, which causes prices to increase.” The teacher might then give a scenario where the prices of goods increase by telling a story about her dad being able to buy pizza for one quarter and then using questioning and discussion techniques to compare that price to today, to demonstrate the increase in price. The teacher would then craft a sentence about buying the generic load of bread at the store and that with inflation, the low price would increase (ex. “The United States printed too many dollars and is experiencing a period of”
inflation; the $1 bread at Walmart now costs five dollars!”). Finally, the teacher would draw a picture to illustrate the sentence (perhaps a loaf of bread labeled $5, a stick figure person being sad at the high price, and lots of dollar bills around the person, since inflation is caused by the government printing too much money).

Then, the teacher would assign individual vocabulary words to each student and have the students create their own grids for their assigned word on a large sheet of paper. This should take around thirty minutes. Then, the students would take turns presenting their vocabulary word grids to the class. Students watching the presentations will be able to fill out the definitions for each word and be able to complete the pictures and sentences after the presentations. The large grids will be posted on the walls as an anchor chart of sorts. Finally, the teacher would distribute a rational cloze paragraph to the students, who could work in pairs to fill in all of the vocabulary words into the paragraph. The presentations and guided practice should take forty-five minutes. Additional rational cloze paragraphs could be completed for warm up practice the following day. The same vocabulary procedure (with different words) will be completed at the start of each content unit for the treatment sections.

During the unit, both the experimental group and the control group will be assessed. Vocabulary quizzes will serve as a formal assessment, student discussions will be monitored to identify the number of times students are correctly using the words in their language, and unit tests will serve as a summative assessment.

*Instruments*

*Vocabulary usage.* Using recording technology, students in both the control and experimental groups will be observed, and the frequency with which they use the vocabulary words correctly in their conversations and during discussions will be monitored and counted.
For example, when filling out a graphic organizer over Populism, the teacher asks “according to the Populists, how could the farmers’ lives be improved?” If a student responds, “If the government regulates the railroads, then the farmers aren’t being charged too high shipping rates” or “The government prints more money, so people have money to buy their crops...but that would cause inflation, and prices would go up,” then that would be counted as using two vocabulary words correctly (regulate and inflation).

Comprehension. Vocabulary comprehension will be measured by scores on the vocabulary quizzes. Students who understand the meaning and context of the vocabulary words should achieve high scores on these quizzes. Rational cloze guided practice and individual practice during warm-ups should increase vocabulary quiz scores, because they help students practice using words in context. Sample questions include fill in the blanks, such as “Upton Sinclair could be considered a(n) _____(muckraker)______, because he exposed problems with the meat-packing industry in his novel The Jungle, which contributed to increased government _____(regulation)______ of sanitation in factories.” Reliability and validity of the vocabulary quiz would need to be established before the study begins.

Academic achievement. Ultimately, vocabulary instruction should improve students’ understanding of the content topics within the units. Academic achievement will be measured with students’ scores on the multiple choice summative exams for each unit. Also, scores on the practice and actual standardized tests could be used to compare students’ achievement for the experimental and control groups. The standardized test is already normed, but the multiple choice summative exams would need to be tested for validity and reliability before the study begins.
Data Analysis

The researchers will use a t-test to compare the quiz and test scores between the students in the experimental group and the students in the control group. The students’ spoken words will also be compared. It is hypothesized that the students in the experimental group will yield higher test scores than the students in the control group. Furthermore, students in the experimental group are expected to have richer discussions and use more vocabulary words in their oral conversations than the students in the control group.
References


