The Effect of Introduced Literacy Strategies on the Use of Academic Content Vocabulary in a High School Biology Classroom

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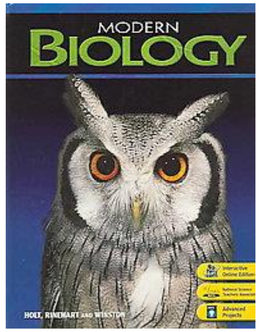
Background

- Cesar E Chavez High School in Delano California is classified as a Title I school.
  - 89% of total enrollment are socioeconomically disadvantaged
  - 87% of total enrollment are of Hispanic/Latino Decent
  - 9% of total enrollment are of Filipino decent.

- Being able to break down scientific vocabulary is an important step to becoming more confident with the science texts. With the diverse backgrounds of my students I wanted my research to focus on the vocabulary of the content to help my students understand the information that they read throughout the course.
- Research population are 9th and 10th graders in Biology College Prep.
- Main source of Literature is the Modern Biology Textbook.
- Topics of focus were Mendelian Genetics, DNA, Ecology, and Evolution.



Questions

- Will implementing different literacy strategies or techniques improve student vocabulary comprehension?
  - Will using graphic organizers help students establish and retain relationships between the reading and vocabulary?
  - By using the SQ3R methodology will there be an improvement in student vocabulary retention?

Methodology

- Pre-Treatment
  - Survey, Assessment, and Student Work
- Post-Treatment
  - Survey, Assessment, and Student Work
- End of Research
  - Student Interviews

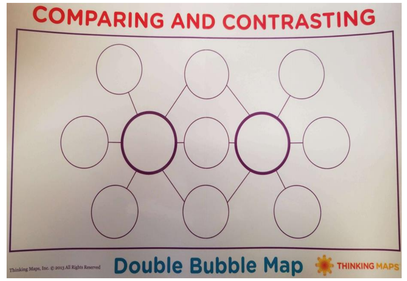
Treatment Description

- Treatment consisted of 2 types of graphic organizers and a study model.
- Graphic Organizers:
  - Science Vocabulary Awareness chart allowed students to examine whole unit words a section at a time.
  - Double Bubble Compare and contrast to allow students to recognize the similarities and differences between vocabulary words.
- Study Model:
  - SQ3R model to help students survey, question, read, recite, and review.

SQ3R Chart

Directions: This chart is helpful when reading a passage. Use one chart for each major section.

Survey Write the m important titles.	
Question Write a who, what, when, where, and why question.	
Read Read all information to answer questions.	
Recite Orally answer questions.	
Review Create summaries and main ideas from the passage.	

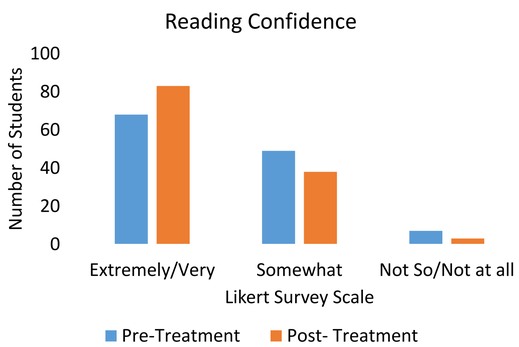


SCIENCE VOCAULARY AWARENESS

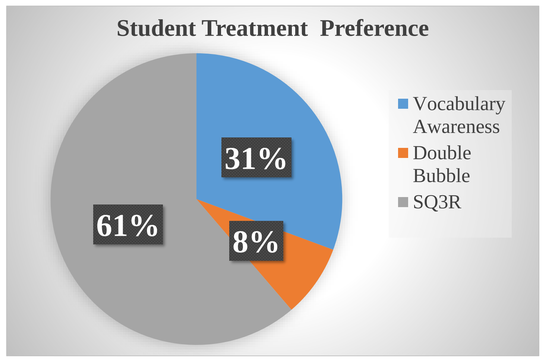
Directions: Use this organizer to assist in building science vocabulary.

Word	Can I define it?	What's it related to?	Definition

Data and Analysis



This research study shows an increase in student confidence in regards to their ability to read the text while utilizing the literacy strategies. Though there was no significant statistical improvement on their assessment scores, student participation increased as they gained confidence while using the literacy strategies. The students indicated a preference for the SQ3R strategy as it allowed them to critically process the vocabulary and concepts they were reading.



References

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