Semantic Feature Analysis (SFA)

Why Is This Strategy Useful?

Semantic Feature Analysis (SFA) has been considered by researchers and experts as an effective strategy because it mimics the neural paths and ways the brain organizes information. By offering students a visual representation, via a matrix, on how terms are alike and different, the students are able to analyze the relationships among the given concepts. In addition, SFA supports reading as an interactive process. The reader is characterized as an active participant who interacts with the text to construct meaning. From this perspective, the reader uses prior vocabulary knowledge as a framework to understand the meaning of new concepts and phrases. Research has shown that active learning is an effective way of learning and retaining knowledge.

Description of Strategy

SFA is an interactive, discussion-oriented strategy for vocabulary instruction. It builds on the following steps:

- The teacher selects a topic or a text and identifies the concepts or words that the student will need to acquire.
- List all words to learn. Ask students to consider each word and determine if it represents a major concept or a specific detail that is related to the larger concept.
- Work with students to list superordinate and subordinate in a matrix. The teacher can use an overhead projector while students complete the matrix in their individual copies of the tool.
- Using predetermined symbols, represent the relationships among concepts. For example, “0” may mean no relationship.
- This activity can be done before, during, or after reading a passage. Before reading a passage, teachers ask students to predict relationships among concepts by using a relationship or grid. After reading, the students and teacher review their matrix and use the text to confirm vocabulary definitions and relationships among concepts. Students are also instructed to write “all you know about the topic” to review content.
- As a last step, conduct discussions to discuss how students represented words in the matrix and what they have learned.

Research Evidence

At least two randomized controlled trials support this strategy. The first study compared the effects of three types of interactive vocabulary instruction to “definition instruction.” The intervention consisted of eight 50-minute sessions over a span of 7 weeks. The subjects were 61 middle school students with learning disabilities. Students in the interactive interventions scored higher on a multiple-choice test for reading comprehension and vocabulary learning than did students in the “definition instruction” intervention. The second study included 50 high school students with learning
disabilities. Intact English and social studies classes were randomly assigned to intervention or comparison conditions. Students in the intervention group applied SFA by creating a relationship chart for each passage they read. Students in the comparison group associated words with dictionary definitions. Results showed that students instructed by using the SFA model had statistically significant higher scores on vocabulary and comprehension. Results of SFA students also remained higher 6 months after the intervention ended.

Sample Studies Supporting This Strategy


Drawing upon theory-driven vocabulary instruction and the vocabulary-reading comprehension connection, this study compared the effectiveness of three interactive vocabulary strategies with “definition instruction.” Subjects were 61 learning disabled junior high students. Using content-area texts, students participated in one of three interactive strategies—semantic mapping (SM), semantic feature analysis (SFA), and semantic/syntactic feature analysis (SSFA)—or in definition instruction (DI). Learning was measured both at short and long term by vocabulary and comprehension multiple-choice items and written recalls. Results from the multiple-choice items suggested that students participating in the interactive strategies demonstrated greater comprehension and vocabulary learning than students receiving DI. Results of the written recalls indicated qualitatively and quantitatively greater recalls at long term for students in the SFA and SSFA conditions compared with the DI condition.


Researchers investigated the effectiveness of an interactive vocabulary instructional strategy, semantic-feature analysis (SFA) on the content area text comprehension (TC) of adolescents with learning disabilities. Prior to reading a social studies text, 50 learning-disabled high school students in resource classes either completed a relationship chart as part of the SFA condition or used the dictionary to write definitions and sentences as part of the contrast condition. TC was measured on a multiple-choice test consisting of two types of items, vocabulary and conceptual, immediately following teaching and again 6 months after teaching. Results indicate that students in the SFA instructional condition had significantly greater TC than did students in the dictionary group.
Sample Activity
(Source: http://www.indiana.edu/~l517/semantic.htm)

Example Relationship Chart
Step 1: Put the vocabulary words you want students to focus on vertically down one axis. List features or ideas associated with those words horizontally across the other axis.
Step 2: Students complete the grid by indicating with a check mark (√) or minus sign (⁻) whether each word possesses the stated features or is related to the ideas. A check mark indicates that the word does possess the feature (or is related to the idea), and a minus sign indicates that it does not.
Step 3: Conduct classroom discussions about students’ grids after they are finished reading.

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<thead>
<tr>
<th>Feature #1</th>
<th>Feature #2</th>
<th>Feature #3</th>
<th>Feature #4</th>
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</thead>
<tbody>
<tr>
<td>Word #1</td>
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<tr>
<td>Word #2</td>
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<td>Word #3</td>
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Additional Resources


