Comprehending Metaphor: Using a Salient Characteristic Analysis Technique (SCAT)

Parker C. Fawson  
*Brigham Young University*

D. Ray Reutzel  
*Brigham Young University*

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Aristotle wrote in the *Poetics* "Metaphor consists in giving the thing a name that belongs to something else. The greatest thing by far is to be master of the metaphor" (Ross, 1952). Comprehension of metaphor and simile can be very difficult for students who are unprepared to process language at a non-literal level. This is often the case because students are typically exposed to comprehension instruction that has been directed at deriving only literal meaning from the text. On the other hand, some speakers or writers do not intend language to be interpreted literally. Students who attempt to make use of literal comprehension strategies when confronted with metaphorical language may become frustrated with their inability to construct meaning. Often a metaphorical statement makes no sense at all, or the information within the passage may seem contradictory or false. Literal level comprehension directs the reader to understand what something is, but metaphorical language makes a comparison between something and what it is not (Billow, 1975). Thus, when considering metaphor it seems critical that comprehension instruction should focus not only on literal uses of language but also on non-literal language to
enrich each reader's understanding of language (Ortony, Reynolds, and Arter, 1978).

Basal reading texts at the intermediate level offer teachers and students only token instruction on how to identify figurative or metaphorical language and do not help children construct the meaning of the metaphor. Instruction typically requires that students distinguish a metaphor from a simile. Both metaphors and similes use dissimilar terms to draw a comparison. Students are taught that a metaphor is a comparison which does not use like or as. Following instruction on defining metaphor and simile, students are asked to identify metaphors and similes in sentences. While this instruction may improve students' ability to identify these figurative language elements, it does not address the more pivotal task of teaching student strategies for constructing meaning from metaphor. However, these same reading basals include selections — many of which are poetry — which require metaphorical interpretations. For example, Durkin (1981) found that the number of poems in five reading basals ranged from 38 to 155 and that comprehension instruction for poetry was rarely included. Justification for this lack of instruction was based on the notion that poetry is meant to be enjoyed and that no instruction should interfere with this enjoyment. However, these same basals dedicate considerable instructional time to the comprehension of literal language, but little to developing understanding of the complex language tapestry found in poetry.

Understanding metaphor, both structurally and figuratively, is an important part of the ability necessary to comprehend a variety of texts. In current terms, comprehension is accomplished when readers relate what is known to that which is unknown (Pearson and Johnson, 1978; McNeil, 1984). This is particularly true with metaphor. The
comprehension of metaphor requires the coalescence of the known, or familiar, with the unknown or the strange. Because metaphor is often used in written and conversational language, it is essential for students to learn how to comprehend metaphor if they are to construct deeper and richer meanings in reading.

**Salience imbalance hypothesis**

Ortony (1979) attempted to describe the nature of metaphorical comprehension with the salience imbalance hypothesis, which is an extension of similarity theory (Tversky, 1977). The salience imbalance hypothesis states that an imbalance exists between shared characteristics of two terms in a metaphorical statement, the topic and vehicle. For example, in the metaphor, *the man's feet were ice*, the topic term (object of comparison) is *feet* and *ice* is the vehicle term (term used to describe the topic). The characteristics of the topic and vehicle terms must be identified to demonstrate the nature of the imbalance (see Figure 1).

In this example, a listing of possible characteristics of the topic, *feet*, might include toes, a heel, used to walk on, they are sometimes large or small, they might get cold or hot. For the vehicle term, *ice*, we identify that it is very cold, made of water, will melt when exposed to heat, can be slick and hard. The only shared or salient characteristic related to both the topic and vehicle terms from the metaphor presented above is *cold*. An imbalance between the topic and vehicle occurs because cold is of relative low salience, or prominence, for the topic term, *feet*, and of high salience for the vehicle term, *ice*. A metaphor is created when this directional low/high imbalance related to the salient characteristic is present. The shared characteristic must be of low salience to the topic and high salience to the vehicle. Without this salience imbalance, there could be no metaphor. Helping students recognize this
salience imbalance can provide them with an effective means for comprehending metaphor.

![Figure 1](Characteristics of Topic and Vehicle Terms)

A critical point to remember is that if the imbalance is reversed to high/low (the shared characteristic is of high salience in the topic and low salience in the vehicle) then there is no metaphor. For example, if we reverse the metaphor described above to read *the ice was a man's feet*, we would no longer have a metaphor. The shared characteristic *cold* is of high salience in the topic and low salience in the vehicle.

Ortony (1979) identified two presuppositions which must be present for the salience imbalance hypothesis to be valid. The first is that the reader must approach the metaphor with some pre-existing knowledge or schema (Rumelhart and Ortony, 1977). Secondly, the reader must be able to identify the relative salience of a shared characteristic.
between the topic and vehicle terms. As mentioned earlier, the shared characteristic must be of low salience, or prominence, to the topic term and high salience to the vehicle term.

Readence, Baldwin, Martin and O'Brien (1984) provided sixth graders and adults with two words and asked subjects to list at least 10 characteristics under each word. The results of the study indicated that both groups of subjects were sensitive to the low/high relationship that existed between the sets of characteristics. In a second experiment, 24 college students were asked to select the matching characteristic of normal and reversed, or transposed, metaphors. The subjects were able to select the critical matching attribute significantly more often in the normal metaphors than in the reversed metaphors. The study concluded that a low/high relationship does exist in the interpretation of simple metaphors.

Teaching metaphorical comprehension

Strategies must be created to assist students in being able to identify the salience of shared characteristics within the topic and vehicle terms of a metaphor. Readence, Baldwin, and Rickelman (1983a) found that children who have difficulty in processing metaphors lack the knowledge of critical matching attributes. Readence, Baldwin, and Rickelman (1983b) also found that if students were taught to locate the critical attributes they were likely to comprehend the metaphor. They suggested that their results pointed to the need for specific vocabulary instruction in teaching children to comprehend metaphors. Children must be taught to identify the matching attributes of the topic and vehicle if they are to be able to identify the meaning contained within the metaphor.
Thompson (1986) developed an instructional strategy to teach metaphorical comprehension which appears to be a modification of traditional Semantic Feature Analysis (SFA). Semantic Feature Analysis is a strategy teachers have used in the past to help students learn how to identify matching characteristics between multiple words. Johnson and Pearson (1984) point out that SFA draws the reader's attention to prior knowledge (and the way it is structured) and stresses relationships between words. Anders and Bos (1986) noted that the foundation of SFA is in schema theory (Rumelhart, 1980) and the vocabulary knowledge research of Anderson and Freebody (1981).

With Thompson's strategy, students must access their prior knowledge of words to be able to identify matching characteristics, much like traditional SFA. This meets the first requirement of metaphorical comprehension as put forth by salience imbalance hypothesis. However, the SFA instructional strategy is not sensitive to the need to show the relative low/high salience of the shared characteristics. It is the identification of this salience which allows students to access the appropriate shared characteristic and construct the meaning of the metaphor. Therefore, it is evident that instructional strategies must be created to assist students in identifying the salience of shared characteristics.

Salient Characteristic Analysis Technique (SCAT)

A Salient Characteristic Analysis Technique (SCAT) was developed to assist students in comprehending metaphorical text. This technique was designed to meet both of Ortony's (1979) presuppositions of salience imbalance hypothesis. To comprehend metaphor effectively, students must use their prior knowledge in identifying characteristics of words and they must identify the low/high imbalance of a common or shared characteristic of the topic and vehicle. The SCAT
requires students to access prior word knowledge and provides graphic representation of the low/high imbalance of shared characteristics.

The SCAT combines the word characteristics identification strengths of an SFA strategy with the necessity to identify salience of shared characteristics within the metaphor. When comprehending metaphor, readers are only comparing characteristics of two words, the topic and vehicle, rather than multiple words.

To use SCAT, the topic and vehicle terms must be identified from the metaphor. We will use our previous metaphor, *the man's feet were ice*, as an example. In this metaphor the topic is *feet* and the vehicle is *ice*. The topic is placed at the top of the SCAT grid and the vehicle is placed at the bottom (see Figure 2). Down the top left side of the grid various characteristics of the topic are listed. These characteristics should be listed from *most salient* at the top of the grid to *least salient* in the middle. We list the characteristics of the vehicle term down the right side of the grid beginning where we left off with the characteristics of the topic. The most salient characteristic of the vehicle is listed in the middle of the grid and the least salient appears at the bottom. The reader then places a plus or minus in each box. A plus is used if the characteristic is attributable to the topic or vehicle. A minus is used if the characteristic is not attributable to the topic or vehicle. The SCAT grid may be as large or small as necessary to represent the characteristics of the topic and vehicle adequately.

As you can see in Figure 2, the shared characteristic for the topic *feet* and the vehicle *ice* is *cold*. The shared characteristic demonstrates the low/high relationship which must
exist with metaphor. *Cold* is a low salient characteristic of the topic *feet* and a high salient characteristic of the vehicle *ice*.

![Figure 2: Salient Characteristic Analysis Technique (SCAT) Grid](image)

The metaphor, *the man's feet were ice*, provides a rather simple example of how effective the SCAT is in providing
students with a visual heuristic to identify shared characteristics within a metaphor as well as the low/high relationship which must exist. It is this characteristic which makes the SCAT such a useful and effective tool in helping students develop strategies to comprehend metaphors.

Sample lesson

While the SCAT provides an effective means of teaching metaphorical comprehension, it is not intended to be used with every metaphor the students may confront. Initially, the teacher directs the construction of meaning from metaphors using the SCAT. Following teacher modeling of the SCAT, students are encouraged to experiment with the technique using metaphors from their reading and eventually internalize the technique as one strategy for constructing meaning from metaphorical statements. The following partial example of teacher modeling uses a metaphor from poetry. When using the SCAT, we do not intend to identify a single appropriate interpretation of the poem. We merely wish to provide students with a heuristic to assist them as they access prior knowledge and identify salience of characteristics prior to constructing their poetic interpretation. The SCAT is most effective in providing a visual representation of metaphorical comprehension.

Teaching modeling. As we read, we may come across metaphorical statements authors use. To understand the metaphor we will need to identify a shared characteristic between the two terms being compared. Today I will show you one way to identify that common characteristic and how you can use this information to construct the meaning of the metaphor.

In the past, we have discussed interpretations of poetry written by various authors. Today I have chosen the poem "Trip" by Langston Hughes (1958) to
demonstrate a process you may use to understand metaphorical statements.

I went to San Francisco.
I saw the bridges high
Spun across the water
Like cobwebs in the sky (p. 146)

In this poem, bridges are being compared to cobwebs. Langston Hughes is not really saying that bridges are cobwebs. He draws this comparison to help us picture what he is describing.

To understand this poem we must identify a shared characteristic of bridges and cobwebs. To do this we first list the characteristics of bridges and then cobwebs. As we generate the lists we try to order characteristics from most common to least common. We will use a grid to help us visualize this process (see Figure 3). Common characteristics of bridges may include: made of metal, made of wood, span rivers, used for automobiles, used for trains, held up by strands of wires. We list these characteristics under the word bridges. Next, we identify characteristics of cobwebs. This list might include the following: made of strands, catch food, difficult to see, found in plants. The shared characteristic from these lists appears to be the crisscrossing strands that make up some bridges and most cobwebs. As we see from the grid, this is a fairly common characteristic of cobwebs and a less common characteristic of bridges. Identifying the shared characteristic helps us to visualize and construct the meaning of the metaphorical statement. In this case the author wishes us to visualize the pattern present on bridges surrounding San Francisco. This pattern is similar to the pattern present in cobwebs.

The teacher models this same procedure with a second metaphorical statement and solicits student participation in
identifying the topic and vehicle terms. Students are also invited to provide some characteristics of these terms. The teacher provides input as needed to support student participation the dialogue. In future lessons, the teacher gradually releases more responsibility (Pearson and Gallagher, 1983) to the students for constructing the meaning of the metaphor using the SCAT.

**Figure 3**

*SCAT Grid for "Trip" Poem*

<table>
<thead>
<tr>
<th>Topic Characteristics</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strips of wire</td>
<td>bridges</td>
</tr>
<tr>
<td>made of metal</td>
<td>+</td>
</tr>
<tr>
<td>made of wood</td>
<td>+</td>
</tr>
<tr>
<td>span rivers</td>
<td>+</td>
</tr>
<tr>
<td>automobiles</td>
<td>+</td>
</tr>
<tr>
<td>trains</td>
<td>+</td>
</tr>
<tr>
<td>Made by spiders</td>
<td>+</td>
</tr>
<tr>
<td>catch food</td>
<td>+</td>
</tr>
<tr>
<td>difficult to see</td>
<td>+</td>
</tr>
<tr>
<td>found by plants</td>
<td>+</td>
</tr>
</tbody>
</table>

+ = possible characteristic  
- = non-characteristic
Concluding thoughts

Teachers have expressed a real need to not only have their students identify figurative language, but more importantly to comprehend it. Given the amount of text students read requiring comprehension of figurative language, it is surprising that very little has been done to provide instructional strategies for teachers to use within their classrooms. This article is an attempt to provide one possibility for teachers who are concerned about teaching comprehension of figurative language.

References


Parker C. Fawson is a faculty member in the Department of Elementary Education at Brigham Young University, in Provo Utah. D. Ray Reutzel is a faculty member in the Department of Elementary Education at Brigham Young University, in Provo Utah.