

SGREL Scoring -- An Example of Improving Scoring Consistency and Accuracy for Assessments of Critical Thinking Skills and Argumentative Writing

Why is “SGREL”, a Semantic Grammar Rubric Expression Language, useful in educational assessment?

It is not good for scoring old-school “essay writing” questions with rubrics like this:

Prompt

Read the last paragraph of the story.

"When they come back, Saeng vowed silently to herself, in the spring, when the snows melt and the geese return and this hibiscus is budding, then I will take that test again."

Write a response that explains why the author concludes the story with this paragraph. In your response, include details and examples from the story that support your ideas.

Rubric Guidelines

Score 3: The response demonstrates an understanding of the complexities of the text.

- Addresses the demands of the question
- Uses expressed and implied information from the text
- Clarifies and extends understanding beyond the literal

Score 2: The response demonstrates a partial or literal understanding of the text.

- Addresses the demands of the question, although may not develop all parts equally
- Uses some expressed or implied information from the text to demonstrate understanding
- May not fully connect the support to a conclusion or assertion made about the text(s)

Score 1: The response shows evidence of a minimal understanding of the text.

- May show evidence that some meaning has been derived from the text
- May indicate a misreading of the text or the question
- May lack information or explanation to support an understanding of the text in relation to the question

Score 0: The response is completely irrelevant or incorrect, or there is no response.

The many limitations of instruments like this are sufficiently well known to not require belaboring here.

But to cost-effectively administer a critical thinking or argumentative writing assignment for the same passage, such as this, an item-specific SGREL rubric can insure consistent scoring with useful feedback -- two limitations to the utility of the instrument above.

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Prompt

Read the Winter Hibiscus story, and carefully re-read the last paragraph.

"When they come back, Saeng vowed silently to herself, in the spring, when the snows melt and the geese return and this hibiscus is budding, then I will take that test again."

Write a response that identifies the analogy that underpins the story, and site evidence to support your claim.

Rubric

A detailed, analytic rubric will award points based on two factors:

Central Claim:

Five scores are possible for the claim:

- Articulates the central elements of the underlying analogy between adaptation of the hibiscus to a new land and the adaptation of immigrants to their new land. 8 points.
- Articulates important elements of the underlying central analogy: adaptation, for the winter hibiscus or the immigrants, requires work, change, accommodation and growth. 6 points.
- Articulates some elements of the underlying central analogy of adaptation for both the hibiscus and the immigrants: work, growth, change or determination and the struggle to survive. 4 points.
- Articulates one or more minimal elements of the underlying central analogy of adaptation for both the hibiscus and the immigrants: work, growth or determination and the struggle to survive. 2 points.
- Neither the underlying analogy nor key aspects of analogy were recognized. 0 points. This includes citing analogies related to "budding in the spring", the annual return or flight south of the geese, or other story elements which are sited without recognition of the story as a story about change and how Saeng can choose to respond to change. Zero points.

Evidence:

The six elements of evidence to support the response that will merit consideration are:

- The winter hibiscus was in some ways different from the hibiscus of their homeland.
- The winter hibiscus was in some ways the same as the hibiscus from their homeland.
- The winter hibiscus was not as pretty...
- The winter hibiscus was strong enough to survive the cold winter
- Adaptation and determination are important to survival

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- Ms. Panouvong could be oblivious to cold, suggesting she was adapting, and she reinforced the importance of “survival of what matters”, both supportive of the underlying analogy of adaptation for survival.

Scoring formula:

Points for the different bits of evidence and the claim above will be combined using a formula that reflects the authors weighting of the relative importance of each evidence claim. Further, response feedback will reflect the specific micro-decisions on scoring to explain both credit given in the response and to identify areas where the response could be improved.

What is more, the technology exists today to automate much of this scoring making the cost effectiveness of such items competitive with selected response approaches.

*SGREL! What is it good for?
Absolutely nothing?*

*SGREL + scoring assistant
is not for scoring
quality of writing;*

*SGREL + scoring assistant
is for scoring
correctness of response*

Application of the rubric to scoring will heighten inter-rater reliability of scoring, provide instructionally-relevant feedback to examinees, and provide defensibility and transparency to scoring outcomes.