Using Post-Reading Questioning to Foster Secondary Students’ Understanding of Literature

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Post-Reading Questioning

- Questioning students after reading has long been a prevalent instructional practice (Durkin, 1979)
  - Mainly used as an assessment tool, but also to aid in literal understanding of text and ultimately higher-order thinking about text

- Beck and McKeown’s 1979 comprehensive study of widely used elementary basal reading series’ post-reading questioning sets
  - Questions sets used likely to disrupt students’ understanding of the story
Beck & McKeown Story Maps

In response, Beck and McKeown developed the “story map” framework (1981) in order to:

- improve students’ existing schema for a story
- improve students’ comprehension of the story
- help students understand the essence of a story so they can then begin to discuss interpretive, analytical, and creative questions about the story

The framework was later also explained in detail, and anecdotal evidence provided, by Pearson (1982, 1984)
What It Is: The Steps of a Beck and McKeown Story Map

- The teacher first lists the major events and ideas in a story, beginning at the starting point and moving through the story in a sequential order.
- The teacher then generates a set of questions from that listing (a question for each major event and idea in a story, beginning at the starting point and moving through the story in a sequential order).
- After reading the story, the students answer the questions.
  - Answering the questions helps students understand the essence of the story and focus on the information central to understanding it.
Why this study?

- Beck and McKeown’s story maps, as they conceived them in 1981, were not experimentally tested.
- It seems logical that asking post-reading questions in the proposed story map structure would aid student comprehension as Beck and McKeown suggest, and anecdotal evidence suggests it does.

Note: Many researchers took the idea of a story map, made it into a graphic organizer students filled out with teacher help, and tested this:
  - Proved to be successful graphic organizer aid for student comprehension (Baumann & Bergeron, 1993; Davis & McPherson, 1989; Emery, 1996; Reutzel, 1984, 1985; Staal, 2000) and led to the National Reading Panel listing story maps as an effective tool (again, as a graphic organizer) for improving text comprehension (NICHD, 2000).
Participants

- 87 students from two urban junior high schools in a large western city
- 16% of students were from minority populations
- 18% of students were eligible for free or reduced-price lunch
Materials

- Three short stories
  - *The Monkey’s Paw* by W.W. Jacobs
  - *The Tell-Tale Heart* by Edgar Allan Poe
  - *Three Skeleton Key* by George Toudouze

- Representative of stories found in middle school anthology texts and commonly used

- Similar across genre (horror/suspense) and difficulty (7th grade)
Materials Continued

■ Anthology Questions
  - Five current middle school anthologies were examined and questions were written based on what was found to be most representative in these anthologies.
    ▪ 8-9 questions organized in the following manner: one personal response question, three to four recall questions, two inferential questions, and two questions regarding literary elements

■ Story Map Questions
  - 10 questions plus 1 extension question based on Beck and McKeown’s guidelines (includes both explicit and implicit comprehension questions in chronological order)
Assessments

- 15-question multiple choice test for each story that consisted of both factual & inferential questions
- Likert-scale student attitude surveys regarding the stories and the types of instruction
The study took place over the course of 3 weeks according the following pattern:

- Day 1—All students read the story.
- Day 2—Students completed one of the following:
  - Anthology Questions
  - Story Map
  - No post-reading questioning
- Day 3—Students completed the 15-question comprehension assessment and attitude survey on the story
## Study Design

<table>
<thead>
<tr>
<th>Group</th>
<th>The Monkey’s Paw</th>
<th>The Tell-Tale Heart</th>
<th>Three Skeleton Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>No post-reading questioning</td>
<td>Anthology Questions</td>
<td>Story Map</td>
</tr>
<tr>
<td>Group 2</td>
<td>Anthology Questions</td>
<td>Story Map</td>
<td>No post-reading questioning</td>
</tr>
<tr>
<td>Group 3</td>
<td>Story Map</td>
<td>No post-reading questioning</td>
<td>Anthology Questions</td>
</tr>
</tbody>
</table>
## Results: Comprehension Tests

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story Map</td>
<td>9.17</td>
<td>2.78</td>
</tr>
<tr>
<td>Anthology Questions</td>
<td>9.15</td>
<td>2.57</td>
</tr>
<tr>
<td>No Treatment (Reading Only)</td>
<td>8.61</td>
<td>2.82</td>
</tr>
</tbody>
</table>
Results: Comprehension Tests

- While the treatment was found to be statistically significant ($p < .005$), the interaction between treatment and the order the students received the treatments was also found to be significant ($p < .001$).

- Receiving either the story map or the anthology questions treatment resulted in higher mean scores on the tests than not having a treatment.

- However, the mean scores with the treatment of story map and with the treatment of anthology questions were not significantly different.
What does this suggest?

- Answering post-reading questions had a positive effect on students’ comprehension of stories.
- The arrangement of anthology questions in the current student anthologies may be in sufficient order to aid comprehension.
  - Similar to Beck and McKeown’s recommendations?
  - Possible familiarity effect?
## Results: Attitude Surveys

<table>
<thead>
<tr>
<th>Question Set</th>
<th>Story Map</th>
<th>Anthology</th>
<th>No Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liked the story (1 &amp; 2)</td>
<td>61% Agree</td>
<td>54% Agree</td>
<td>48% Agree</td>
</tr>
<tr>
<td>Liked the genre (3 &amp; 4)</td>
<td>68% Agree</td>
<td>68% Agree</td>
<td>51% Agree</td>
</tr>
<tr>
<td>Understood the story (5 &amp; 6)</td>
<td>73% Agree</td>
<td>48% Agree</td>
<td>56% Agree</td>
</tr>
<tr>
<td>Felt answering questions helped them to understand the story (8 &amp; 9)</td>
<td>43% Agree</td>
<td>32% Agree</td>
<td>N/A</td>
</tr>
<tr>
<td>Liked answering questions (7 &amp; 10)</td>
<td>36% Disagree</td>
<td>44% Disagree</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Results: Attitude Surveys

Students who read the story with the story map (regardless of which story it was)

- Liked the story better...
- Felt they understood the story better...
- Felt that using the story map helped them to better understand the story...

Than if they had read the story with the anthology questions or with no treatment
Results: Attitude Surveys

Students who read the story with either treatment reported liking the genre better than if they read the story without a treatment.

The students in general did not like answering questions after they read the story, but disliked answering the anthology questions more than doing the story map.
Conclusions

- Post-reading questioning is, in general, an effective way to aid student comprehension.

- The anthology post-reading question sets, as compared to the basal question sets Beck and McKeown looked at in 1978/9, show an improvement.
  - While the order of the questions did not usually follow the chronological order of the story, they did proceed in order from more literal questions to more higher-order thinking questions.
    - Started with a personal response question (not a high-level response question), then three or four recall questions, followed by two inferential questions, and finally two questions regarding literary elements (these last two are a bit more unrelated to the actual comprehension of the story itself).
The story map framework, as conceived by Beck and McKeown, needs more research but it does appear to be an effective method for improving student comprehension.

The story map framework also appears to be more motivating for students as an aid for comprehension than post-reading questions from the anthology readers:

- Students believe it is more useful in helping them understand the stories, they enjoy the stories more when they read them with a story map, etc.
Contact Information

If you have further questions or comments about this study, please contact us at the following email address:
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