

Titles as a Double-Edged Sword in Memory for Prose Passages

Barbara C. Malt

Lehigh University

This is Sample Paper 1: One-way Design

The experiment and data reported here were fabricated for teaching purposes only and are loosely based on work by Sulín and Dooling (1974)

Abstract → boldface

Identify the topic.

← Although titles have been shown to improve overall memory for prose passages, they may also cause certain kinds of errors to occur. We tested the hypothesis that prior knowledge of a theme or title for an ambiguous passage may cause people to incorrectly think that the material brought to mind by the theme or title was part of the information they actually read. We presented college students with a short text about a girl who had a difficult childhood. Half of the participants read the paragraph by itself, and half of them read it with the title, *Helen Keller's Early Years*, above it. We predicted that on a subsequent memory test, participants given the title would incorrectly think that they had read sentences such as "She could not hear or see," which were not in the actual text but might have been brought to mind by the title.

→ State the hypothesis.

Explain how the hypothesis was tested.

State predicted outcome if hypothesis is right.

Give the result, making clear whether or not it was as expected.

← Consistent with our prediction, participants who saw the title did make more such memory errors than participants not given the title. Thematic knowledge may increase false memories as well as true memories for materials.

→ State what you conclude from the data.

The Abstract should be no more than about 2/3 page long.

Margins for the whole ms. should be 1 inch on all sides. They are larger here to allow for the comments.

Titles as a Double-Edged Sword in Memory for Prose Passages →

Title here

People often need to remember information they have acquired from prose passages – for instance, in order to answer questions on an exam from their reading assignments, in order to write reports at work based on sources they have collected, or simply for the pleasure of recalling a story they have read. Although some people claim to have photographic memories that allow them to easily remember everything they read, most people are aware that their memory for what they have read is far from perfect.

Start broad – use the opening paragraph to introduce the topic

Studies of memory for text have shown that performance can be improved by the presence of informative titles. For instance, Bransford and Johnson (1972) presented people with passages containing vague and ambiguous descriptions of common activities. A sequence of sentences might go something like this, “The first step is to separate the objects into piles. It is important that the piles be made correctly; otherwise, unfortunate problems can arise. Then the piles must be taken to the appropriate location. Once there, the next step is to prepare the machines for the task.” Bransford and Johnson found that recall of the passage was poor for people given the passage alone, but it was much better when participants received a title such as *How to do Your Laundry* that

Paragraphs should have an initial sentence that defines the topic of the paragraph.

The rest of the paragraph should stick to the same topic!

Use APA citation style in referring to articles

Describe what is known about the topic.

allowed them to use their general knowledge to help interpret the sentences. Studies such as this one suggest that knowing the theme or topic of a passage in advance can help people understand and later recall the text.

Draw a conclusion from the past literature.

Use transition words and phrases like “However,” “In contrast,” “As a result,” etc., to identify how a paragraph is related to its predecessor. The Intro should make a logical argument leading to your experiment.

← However, it is possible that knowing a theme or topic in advance might not always be helpful in improving memory for text. For instance, suppose that when people know that Bransford and Johnson’s (1972) passage is about doing laundry, they assume that the phrase “the piles” refers to piles of clothing, and the phrase “the appropriate location” refers to a laundry room. As they read the passage, they may be picturing piles of clothing in a laundry room in their mind. Later on, when they remember what the passage said, it is possible that they will, wrongly, think that the passage actually talked about piles of clothing or a laundry room, or both. In other words, they may create some false memories because of the interpretations they made guided by the title.

Narrow in on the specific question you’re interested in.

Identify an idea that can be evaluated.

State the hypothesis that you will test.

← The hypothesis we will test, then, is that prior knowledge of a theme or title for an ambiguous passage may cause people to incorrectly think that the material brought to mind by the theme or title was part of the information that they actually read in the passage. To test this idea, we presented college students with a short text about a girl who had a difficult childhood. The text contained sentences such as “She was wild, stubborn, and violent”

Describe in general terms how you will test the hypothesis.

and “She could not learn to read or speak.” Half of the participants read the paragraph by itself, and half of them read it with the title *Helen Keller’s Early Years* above it. All of the participants then read a list of sentences and indicated which ones they believed actually appeared in the passage. Some of these sentences included information about Helen Keller, such as “She could not hear or see”, that were not in the actual text but that might have been brought to mind by those who had the title. If our hypothesis is correct, participants should be more likely to think they read these sentences if they read the passage with the title than if they read it without the title.

Wrap up by stating your prediction – the expected outcome of the experiment if your hypothesis is correct.

Method →

Section headers are boldfaced

Participants

Forty Lehigh University undergraduates participated for course credit. Approximately half were male and half were female.

← **Design**

A Design section is optional in APA style, but for this course, always include one.

The independent variable was Presentation Mode, with two levels: With Title and Without Title. The dependent variable was the number of sentences related to the title that the participants incorrectly identified as having been present in the passage.

Identify the independent and dependent variables.

The experiment used a between-subjects design, with 20 participants randomly assigned to the With Title condition and the other 20 assigned to the Without Title condition.

Identify the type of design.

Materials

The passage presented to participants was taken from previous research on memory for text by Sulvin and Dooling (1974). As already described, it concerned a girl whose childhood was difficult. It was 12 sentences long, and each sentence described some aspect of her behavior, abilities, or family life. The complete text of the passage can be found in Appendix A. The passage was presented in typed form on a sheet of paper. Above the passage on half the copies was the title *Helen Keller's Early Years*. The other half had no title.

Be thorough in describing materials, but don't include details irrelevant to testing the hypothesis (like text font or brand of paper).

If materials can't be given in full in the text, include a complete set in an appendix.

Don't forget to identify how the independent variable was operationalized.

The memory test was devised by the experimenters. It contained 15 questions. Eight of these consisted of sentences that actually did appear in the passage. For example, one was "She was wild, stubborn, and violent." Three of them consisted of sentences that did not appear in the passage and were not closely related to information that might be brought to mind by the title. For example, one was "She spent many happy summers in Kentucky."

Explain the reason for anything that is not self-evident.

The purpose of these questions was to make sure participants had paid enough attention to the passage to distinguish completely false information from information related to the text.

Finally, the critical questions were four that contained information that might have been called to mind by the title, but that did not actually appear in the text. These were, “She had suffered from scarlet fever”, “She could not hear or see”, “She could not speak”, and “Her parents despaired about her condition.” The complete memory test can be found in Appendix B.

Explain how the dependent variable was operationalized.

Procedure

Participants completed the experiment in groups of three to five. The experimenter told them that they were participating in an experiment on story understanding. They were further told that they would be reading a short passage and then tested for their understanding of it. The experimenter asked them to read at their normal speed, and to just try to understand the story. No mention was made of a memory test, so that they would not adopt any special strategies to try to memorize the passage.

Describe the sequence of events in the experiment in chronological order.

Be complete, but don't include minor details (e.g., the experimenter said hello, the participant sat down), unless they are relevant to the purpose of the experiment.

After any questions were answered, the passages were distributed and participants were asked to begin reading. All participants in a group were given the same version (either With Title or Without Title) so that they would not be aware that there was a different version from the one they received. Participants were asked to turn the paper over when they had finished reading it.

Again, state the reason for any not self-explanatory.

After all participants had turned over their papers, the experimenter handed out the “comprehension test” (actually the memory test). Participants were asked to put a check mark next to each sentence that they thought they had read in the passage, and to put an X next to each one they thought they had not read. Participants were asked to work at their own pace, not to look at anyone else’s paper, and to turn over the test when they were done. When all participants had turned over their tests, the tests were collected and the participants were thanked, debriefed, and dismissed.

Results

The questions containing information not included in the text, but unrelated to Helen Keller, were examined first to make sure that participants had been paying attention to the text when they read it. No participant made more than one error on these questions, indicating that all of them had been paying attention.

Explain any preliminary checks on the data, if needed.

The memory tests were scored based on the four questions that had material not included in the passage but closely related to the title. Each test received a score of 0 to 4 indicating how many of these questions the participant incorrectly marked as having been read in the text. Then we calculated the mean number of questions incorrectly marked for the With Title condition and the Without Title condition.

Explain how the data were scored and tabulated to arrive at the numbers that will go into the statistical tests.

Briefly remind the reader of the predicted outcome if hypothesis is correct.

← If our hypothesis is correct, then more errors should have been made in the With Title condition than in the Without Title condition. The pattern of means is consistent with this prediction. A mean of 2.2 errors was made in the With Title condition, whereas a mean of only 0.6 errors was made in the Without Title condition. The difference between the means was significant, $F(1, 39) = 3.56, p < .05$. The outcome therefore supports our

State whether the pattern of data is consistent with the prediction.

Then give the actual data.

Then give the statistical test that shows if this difference is meaningful.

Last, draw a conclusion from the data.

{ hypothesis that knowing a theme or title for a piece of text may sometimes cause people to mistakenly believe that information brought to mind by that theme or title was actually part of the text.

Discussion

Briefly summarize the outcome in general terms (no numbers).

{ We found that people who saw a title for a piece of text later falsely recognized more sentences related to the text than people who did not see the title. Our results suggest that when people read a piece of text, sometimes they may think that a certain thing was said in the text that actually was not. They may incorrectly “remember” this material because it was brought to mind by the title or other source of information, and the material brought to mind becomes part of their memory of what they read.

Elaborate on implication of the data for the hypothesis.

Remember, each paragraph should have a topic sentence, and the rest of the paragraph should stick to this topic.

{ This result raises the question of whether it would be better not to give people titles or other sorts of information about what they are about to read before they read the material. We think that it would be wrong to draw this conclusion. Although some errors



of the sort we found may be made, previous research (e.g., Bransford & Johnson, 1972) does suggest that titles also benefit people by increasing their overall recall of information. Although we did not examine our participants' performance on the questions referring to correct material in our experiment, if we had done so, we might have found that people who received titles performed better than people who did not have titles. The effect of titles, then, may be a double-edged sword – on the one hand, it may improve memory performance overall, but on the other hand, it may contain some risk of also increasing errors of a certain type.

Consider further implications of the data.

Draw a conclusion for the paragraph.

In general, the benefits of titles may outweigh the costs, so we do not suggest removing titles from passages despite the possible disadvantages.

However, our finding does suggest that simply viewing titles as devices that increase recall and improve comprehension is too simplistic. The situation seems to be more complicated, in that there may be negative consequences of titles as well as positive. People do not seem to be aware of the negative consequence, or at least they are not able to recognize when it has occurred, because if they were aware, they would not have made the errors on the memory test. Therefore, it may be helpful in improving memory accuracy for people to become more aware that they need to

Wrap up with an overall conclusion.

Avoid “more research is needed” as your conclusion. Be concrete about what is needed to advance theory or practice.

distinguish between what they actually read and what they may
have thought about as they read.

References

- Bransford, J. D. & Johnson, M. K. (1972). Contextual prerequisites for understanding: Some investigations of comprehension and recall. *Journal of Verbal Learning and Verbal Behavior*, *11*, 717-726.
- Sulin, R. A. & Dooling, D. J. (1974). Intrusion of a thematic idea in retention of prose. *Journal of Experimental Psychology*, *103*, 255-262.

Follow APA reference format!

Appendix A

Put materials here, if needed

Appendix B

Put more materials here, if needed