4-25-2019

The Usefulness of Bridging Inferences and Elaboration Strategies in Comprehension

Sabrina Urick
College of Saint Benedict/Saint John's University, SURICK001@CSBSJU.EDU

Nicole Praska
College of Saint Benedict/Saint John's University, NAPRASKA@CSBSJU.EDU

Follow this and additional works at: https://digitalcommons.csbsju.edu/ur_cscday

Recommended Citation
Urick, Sabrina and Praska, Nicole, "The Usefulness of Bridging Inferences and Elaboration Strategies in Comprehension" (2019). Celebrating Scholarship and Creativity Day. 55.
https://digitalcommons.csbsju.edu/ur_cscday/55

This Poster is brought to you for free and open access by DigitalCommons@CSB/SJU. It has been accepted for inclusion in Celebrating Scholarship and Creativity Day by an authorized administrator of DigitalCommons@CSB/SJU. For more information, please contact digitalcommons@csbsju.edu.
The Usefulness of Bridging Inferences and Elaboration Strategies in Comprehension

Nicole Praska & Sabrina Urick
Advisor: Catherine Bohn-Gettler

Abstract

Reading is an essential part of everyday life. This is especially true in school and research situations. Within reading, there has been a noticed deficit in the ability to comprehend science texts (McNamara, 2017). The self-explanation and reading strategy training (SERT) is a training program that provides strategies to help with the comprehension of these texts (McNamara, 2017). SERT provides a description of self-explanation (put in own words) and six reading strategies (McNamara, 2017). These strategies are comprehension monitoring, paraphrasing, elaboration, logic/common sense, predictions, and bridging (McNamara, 2017). All of these strategies assist in reading comprehension, and allow a reader to go beyond a text to make connections. We specifically focused on bridging and elaboration strategies that the readers presented as a way to comprehend the text in this study. We found that SERT increased the accuracy, apparent relationships and contribution averages for elaborations and increased accuracy for bridging.

Introduction

The goal of this study was to examine study strategies that influence comprehension, especially bridging inferences and elaborations. In the study, we examined variations of Self-Explanation Reading Training (SERT). SERT supports self-explanation and six reading strategies (McNamara, 2017). These strategies are comprehension monitoring, paraphrasing, elaboration, logic/common sense, predictions, and bridging inferences (McNamara, 2017). We examined whether SERT instructions provided in the form of process versus product instructions would better facilitate effective comprehension processes such as bridging inferences and elaborations.

Bridging Inferences

Bridging inferences are connections to previous information in a text to facilitate comprehension of the text (Graesser et al., 1994). Bridging inferences are associated with deeper comprehension goals (van den Broek et al., 2001) and facilitate building a stronger mental model through local and global text connection (Graesser et al., 1994). One goal of this study is to see whether process versus product instructions influence the frequency and quality of bridging inferences generated.

Elaborations

Elaborations occur when readers connect current text to background knowledge (Bohn-Gettler & Rapp, 2014 and McCudden & Schraw, 2006). This helps facilitate text understanding (McCudden & Schraw, 2006) and problem-solving (Bohn-Gettler & Rapp, 2014), and aids a reader in going beyond the given information (McNamara & Magliano, 2009). In this study, we examined whether SERT increases elaborations when reading a text on evolution.

Hypothesis

SERT instructions will increase the use of effective comprehension strategies such as bridging inferences and elaborations. In addition to this, we expect to see the greatest level of effective comprehension strategies for readers receiving the process-and-product instructions.

Methods

99 participants from undergraduate, Midwestern college.
Controlled for knowledge by using shortened version of the Natural Science test, CINS (Athanasiou & Mavrikaki, 2014)
Participants were split into 4 instructional manipulations to practice a written think-aloud task:
Condition 1: control group; received no process of product instructions and wrote down anything that came to mind
Condition 2: process only group; performed a written think-aloud task using SERT
Condition 3: product-only group; informed that after reading they would be asked to explain the reasons why Piloses have skinny noses
Condition 4: process-product group; asked to think-aloud using SERT during reading and informed that after reading they would be asked to explain why Piloses have skinny noses
Participants were given the text, “How the Piloses Evolved Skinny Noses” (Kelemen, 2017) and performed a written think aloud task as they read
Think-aloud responses were coded by identifying elaboration and bridging inferences in each response.

Results

Bridging

These results were significant for bridging accuracy meaning that when participants referred to context stated previously, they normally retained the information and presented it accurately in a later part of the study. This is important because it shows that the information they are learning is retained throughout the text.

Elaborations

The accuracy was highest for process-and-product. Process-only was higher in comparison to product-only and control.

Discussion

The results suggest that Self-Explanation Reading Training can help readers accurately encode, store, and comprehend textual information by being better able to use bridging inferences and elaborations in the process-product condition as well as process condition. The results from this experiment suggest that readers should employ specific strategies during reading, and not focus on only the end product; for example, readers who engaged through the entire text attained better results than those who were only asked to respond at the very end of the test. Using bridging inferences and elaborations accurately will increase comprehension of texts. This is important because there continues to be a deficit in readers’ abilities to understand scientific texts (McNamara, 2017). Instructors should emphasize process and product instructions during reading and not focus entirely on product instructions. This is important for readers to understand to their fullest ability the text they are reading. Instructions are not always implied, and many readers will interpret texts differently or without full detail when they don’t know what information is the most important to grasp. These instructions have been correlated with increased comprehension, especially in bridging inferences and elaboration generation.

References