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Boosting Reading Comprehension Through Response Activities

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Boosting Reading Comprehension Through Response Activities

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An Action Research Project Presented
in Partial Fulfillment of the Requirements
For the Degree of Master of Education

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Abstract

This action research project was conducted to help determine if the use of written reading response activities would improve reading comprehension when students are reading independently. The study was conducted with twenty 3rd grade students. The students read one text a week for ten weeks and completed written reading response activities before, during, and after reading each text. The reading responses focused on the comprehension strategies of predicting, questioning, visualizing, and summarizing. The goal was for the students to build the metacognitive skill of comprehension monitoring and use the reading strategies when independently reading. Data was collected from teacher created rubrics from the reading responses, comprehension quizzes for each text read, and reading comprehension scores from the aimwebPlus Universal Screening assessment. Analysis of the data showed a positive effect size of the use of reading responses on reading comprehension when reading independently.

Keywords: comprehension strategies, reading response, comprehension monitoring

Boosting Reading Comprehension Through Response Activities

Being able to comprehend texts is the ultimate goal of reading. It is imperative for children to be able to develop strategies to help them understand and make connections to the texts they encounter (Dorn & Saffros, 2005). This is especially critical for third grade students. Third grade is a momentous year in a child's academic development (Hernandez, 2011). It is during this year that instruction tends to move from a basic proficiency in literacy to the use of more multifaceted methods of comprehension (Hart & Stebick, 2016). The ability to comprehend texts is crucial for students' future academic success and for the duration of their lives (Dorn & Saffros, 2005). According to a study conducted by Hernandez (2011), if students are not reading proficiently by the end of third grade, approximately one in six of them will fail to graduate on time.

Comprehension is an intricate process that is controlled by intellectual, social, emotional, and perceptual encounters (Dorn & Saffros, 2005). When students read, they are using a variety of comprehension strategies in order to gain an understanding of the text. It has been noted that the majority of instructional time spent in the primary grades focuses on phonics, fluency, phonemic awareness, and decoding, while very little time is spent on comprehension and the strategies to monitor it (Peterson, 2019; Gutiérrez-Braojos, Fernández, & Salmerón-Vílchez, 2014). However, all early elementary readers need the opportunity to think deeply about text by questioning, inferencing, and making text connections (Peterson, 2019).

Explicitly teaching these strategies to students is imperative in order to help them become successful readers (Ness, 2011; Yeomans-Maldonado, 2017). Modeling the strategies through the use of think alouds can allow teachers to demonstrate what good readers do when they dig into a text. There also needs to be a way to assess their thinking. A response to reading can

provide evidence to know if a student is using these strategies and what they are thinking and learning (Harvey & Goudvis, 2007). Reading responses can come in many different forms and can utilize a variety of strategies.

The purpose of this action research is to determine if reading responses are effective in increasing reading comprehension as well as building the metacognitive skill of being able to monitor comprehension. At the beginning of the school year, eleven of the twenty students in this teacher researcher's third grade classroom were being progress monitored for reading due to low reading scores on the Fall aimswebPlus Universal Screening assessment. This teacher researcher was looking for ways to improve comprehension that also promoted self-monitoring when reading independently. While there are many different reading comprehension strategies, this teacher researcher chose to use predicting, questioning, visualizing, and summarizing activities as the strategies to focus on. Through the use of those reading response activities, this teacher researcher is looking to answer the following question: Will the implementation of a response to reading activity increase students' comprehension during independent reading time?

Literature Review

Understanding what is read is critical to learning. Comprehension relies on the reader's ability to not only think about what the text is saying, but also to recognize what to do when there is a break down in his or her understanding (Tomczak, 2014). Most children do not naturally know how to problem-solve to get the meaning of texts. It is safe to assume that all students need to be explicitly shown (Hart & Stebick, 2016). It is important for teachers to explicitly teach students various comprehension strategies as well as how to monitor comprehension. Dependence on one strategy is not enough. An accomplished reader effectively and fluidly selects multiple reading strategies when meaning breaks down (Tomczak, 2014; Annevirta & Vauras, 2006). Not every student learns the same way nor are they all at the same level. The important thing to remember is that students cannot go it alone (Harvey & Goudvis, 2007).

Building reading comprehension skills is dependent on strengthening the cognitive processes that come naturally with strategic readers (Kolić-Vehovec & Bajšanski, 2006). In a study conducted in 1984, Palinscar and Brown discovered four comprehension strategies that help build comprehension-monitoring skills. These are questioning, summarizing, predicting, and clarifying. During the study, they realized that the use of these might enable readers to recognize and respond to indications of a breakdown in understanding (Palinscar & Brown, 1984).

Metacognition

Accomplished readers also have a higher level of motivation because they are prepared to use a variety of strategies when needed (Kolić-Vehovec & Bajšanski, 2006). One way for students to learn how to use multiple strategies during reading is to get them to think about their

thinking. This metacognition involves planning, monitoring, and evaluating while trying to understand the text they are reading (Klingner, 2004). It is said that metacognition comes to light during early childhood, but may not fully emerge until around the age of eight (Connor, 2016). It becomes more influential and unambiguous throughout the developmental years and also becomes more disciplined by the student (Kolić-Vehovec & Bajšanski, 2006).

Readers who have metacognitive awareness can choose which comprehension strategy is needed while reading (Cobb, 2016). Often, developing readers do not know that the strategies exist or they are learned in isolation and they do not understand when to use them appropriately (Sperling, Ramsay, Reeves, Follmer, & Richmond, 2016). It is important for teachers to understand what strategies students are using and how well they are applying them in order to improve instruction (Harvey & Goudvis, 2007). Therefore, there needs to be a lot of practice with an array of reading strategies along with teacher feedback on the effectiveness of strategy usage in order to cultivate metacognitive awareness (Kolić-Vehovec & Bajšanski 2006). Instruction must also include how to use these various metacognitive strategies before, during, and after reading. As students build metacognition, they will begin to incorporate comprehension strategies naturally. Being able to internalize various comprehension strategies that foster understanding is what matters the most (Harvey & Goudvis, 2007).

Assessment

During the assessment of comprehension skills, attention must be paid to the text levels used. Text levels categorize books based on a gradient of increasing text complexity. Students should be reading material at their instructional text level with sufficient fluency. According to Klingner (2004), when the text is at a frustration level or an accurate level but with labored fluency, comprehension will be hampered. On the other hand, when the text is too easy, some

cognitive and metacognitive processes will not be activated because the text needs to include some challenging elements to trigger those skills (Klingner, 2004).

Many of the conventional methods used to assess reading comprehension do not give specific data on how well a student truly understands what is read, nor do they show how a reader uses their cognitive and metacognitive abilities or what particular area they may be struggling with (Klingner, 2004). A written response to reading is a good tool to confidently assess a student's comprehension, much more so than a series of literal questions (Harvey & Goudvis, 2007). When students write about what they have read, teachers can get a good indication of their understanding. Writing demonstrates a much better understanding than fill-in-the-blank or multiple-choice questions that could possibly just be a good guess.

Written Response to Reading

Writing about reading is a part of a balanced reading program. Past research has shown that when teachers in the early elementary grades engage their students in writing about what they have read, there is an increase in reading skills (Peterson, 2019). Writing influences reading by slowing the thought process down enough to allow the reader to think more carefully about word parts and meaning (Dorn & Jones, 2012).

Writing not only contributes to reading skill development, but leads to deeper understanding (Dorn & Soffros, 2005). It allows students to become more aware of their thinking while writing and can then enhance content understanding (Hebert, Simpson, & Graham, 2013). In 2011, Graham and Hebert conducted a meta-analysis of 65 studies on the impact of writing on reading. When looking into whether writing about texts that students read improved comprehension, they discovered that a great majority of the analyzed studies had a positive effect size. Graham and Hebert (2011) also found that there was a positive influence on

reading comprehension for lower readers and writers when they wrote about their reading. Simply put, when students write about the texts that they have read, they think more deeply about those texts.

Writing enables students to better organize their thinking. They are provided with tools that help make their thinking more concrete and help them to analyze and connect with key ideas of the text (Graham & Hebert, 2011). Graham and Hebert (2011) took the analysis a step further and tried to break it down to specific writing activities, such as summary writing, questioning, extended responses, and note taking. Each activity was shown to be effective at increasing reading comprehension, but the authors found that generating questions brought the lowest effect size while extended writing brought the highest (Graham & Hebert, 2011). The variance in the effect sizes led Graham and Hebert (2011) to propose that different writing about reading activities produce different influences on comprehension. However, in 2013, Hebert, Simpson, and Graham conducted another meta-analysis to further breakdown the individual writing activities, stating that the activities were not directly comparable because the individual writing activities had a different desired outcome. With this analysis, they directly compared the writing activities and discovered that one writing activity is not better than another when looking for ways to boost comprehension and therefore, they could not recommend that educators use a specific writing activity (Hebert et al., 2013). Teachers should focus on improving writing instruction and skills if they hope to improve reading comprehension. The process that goes into forming content should improve one's understanding of content (Graham & Hebert, 2011).

Writing can induce and reinforce the practice of strategic learning (Bangert-Drowns, Hurley, & Wilkinson, 2004). Building metacognitive awareness about comprehension monitoring can be enhanced with the help of writing (Bangert-Drowns et al., 2004). Through

writing, readers can evaluate their understanding or confusion (Bangert-Drowns et al., 2004).

Students can also forge their own analysis of the text and develop a deeper understanding (Peterson, 2019). One does need to be cautious with the use of writing activities. While writing may improve reading comprehension in lower learners, those with poor writing skills may find the task to be too daunting and it may be detrimental to their motivation to learn (Bangert-Drowns et al., 2004).

Predicting

Making predictions is a comprehension strategy that can help children become invested in their reading. Predicting can both improve understanding and allow students to monitor their comprehension (Palinscar & Brown, 1984). The objective of predicting is to get the readers involved in the higher-level thinking process of carrying out various tasks concurrently (DeVries, 2015). These tasks include drawing on prior knowledge, supplying details, and determining if the prediction they made was accurate (DeVries, 2015). Students become engaged in the texts they read because they want to see if their prediction comes true. Poor readers often do not try to predict what will come next in a text, whereas skilled readers will automatically make predictions (DeVries, 2015). A good way to help struggling readers make predictions is to have them look at the picture on the cover and make a guess as to what the story will be about. If the predictions are not correct, the readers are provided with an opportunity to make adjustments to their thinking as they are reading. They can then form a new prediction.

Predictions should be made before reading to engage the students and prepare for what is to come. This preparation step is beneficial for all students, but particularly for struggling readers (Hart & Stebick, 2016). It is important for struggling readers to ponder about what they will be reading because if they are not prepared and invested in the text, there may be some

disruptions and a decrease in motivation which will make the readers want to withdraw from their reading (Hart & Stebick, 2016).

Predictions can also be made during reading if the original prediction was not correct or as characters change. Predicting goes along with making inferences (Harvey & Goudvis, 2007). Students need to use their background knowledge about what they know and infer what they think will happen next. Read-alouds can be great opportunities for teachers to model how to make predictions so readers can use predicting as a way to understand the texts when they read independently (DeVries, 2015).

Questioning

The Iowa Department of Education (2016) requires that students be able to demonstrate understanding of texts by being able to ask and answer questions. Therefore, questioning and comprehension must be a critical part of literacy instruction. Questioning is good way to engage in higher-level thinking and build understanding. Children are naturally inquisitive, but often many of the questions are teacher generated (Ness, 2017). By allowing students to generate their own questions, it will help keep them focused, develop a better understanding of what is being read, and give them some ownership in their learning. When students can master generating questions in familiar texts they are then better able to apply that strategy to new texts and various genres (Ness, 2017).

Sperling et al. (2016) suggest using the Elaborative Interrogation (EI) strategy that gets students to ask why questions. With it they write and answer why questions that draw from their natural curiosity and current understanding with the objective being that they can build new understanding. Another strategy is using open-ended questions that require students to develop and write their own responses and organize their knowledge. Using open-ended questions has

been widely used and allows students the ability to demonstrate their thinking and understanding (Özyeter & Kutlu, 2018). Creating open-ended questions can boost higher order thinking. When students can generate and answer their own open-ended questions their comprehension can be enhanced (Peterson, 2019).

Students are naturally curious about what happens in the world. The questioning strategy draws upon that sense of wonder and can be easily implemented in the classroom with very little initial input from the teacher (Sperling et al., 2016). However, teachers should help students to realize what they are capable of doing by creating a classroom environment that allows them to use higher order thinking and create questions that help them to advance their comprehension (Özyeter & Kutlu, 2018). Classroom activities should focus on the readers' individual and cognitive abilities in order to encourage higher order responses (Özyeter & Kutlu, 2018). When students are given the opportunity to develop their own questions, they are given the advantage of being able to better comprehend the texts they have read and engage their higher order thinking abilities (Ness, 2017). They begin to take control of their own learning and understanding.

Visualizing

When readers visualize, they are creating a movie in their mind. The reading becomes more personal and keeps the reader engaged because they become attached to the characters they are picturing (Harvey & Goudvis, 2007). Visualizing what is read is a natural reaction of the brain if there is appropriate background knowledge to be able to create the images (Dorn & Soffros, 2005; Harvey & Goudvis, 2007). By creating visual images of the text, students can strengthen their understanding. Full comprehension requires the reader to construct the mental pictures the author intends. Meaning is created when the author's message is interpreted through

the lens of the reader's existing schema (Dorn & Soffros, 2005). It has been discovered through research that the ability to picture what is happening in a story is a good way to distinguish more capable readers from less capable readers (De Koning & Van der Schoot 2013). When students struggle with visualizing, they often demonstrate a lack of understanding, therefore it is seen that being able to create accurate mental images is advantageous to comprehension (De Koning & Van der Schoot, 2013).

Internal visualization, such as making mental images that cannot be observed, and external visualization, such as drawings, are two visualization strategies that can help boost comprehension. These strategies are interconnected since external visualization cannot happen without first envisioning the text in one's mind (De Koning & Van der Schoot, 2013).

Unfortunately, very little consideration is given to instructing students to use these visualization strategies when reading texts (De Koning & Van der Schoot, 2013). It is important for a teacher to explicitly model how to visualize while reading a story aloud to students, stopping at various points to describe what is being seen in the teacher's mind and reflecting on the teacher's schema. Simply telling students to picture what they see is not enough as it may prompt a misinterpretation of the story (De Koning & Van der Schoot, 2013). The students need to have their background knowledge activated so they have experiences from which to draw those images (Dorn & Soffros, 2005).

Summarizing

Summarizing is a beneficial reading comprehension strategy to use after reading. When summarizing a text, readers retell what they have read in their own words. They sort out the information they have read and pull out the essential ideas (Harvey & Goudvis, 2007). When summarizing, a reader can provide various story elements, such as characters, setting, problem,

events, and solution (DeVries, 2015). Good readers can retell the story in sequence, providing the important events at the beginning, middle, and end of the story. Being able to retell the actions in sequence is beneficial to surveying fiction and will also help support students when building understanding in content area reading such as science and history (DeVries, 2015). Harvey and Goudvis (2007) recommend having readers stop throughout the text to think about what they read. This helps readers to monitor and keep track of their understanding.

Summary writing is very difficult for younger readers (Pirc & Pecjak, 2018). Having a good understanding of the text is the difference between writing a high quality summary and writing a poor quality summary (Pirc & Pecjak, 2018). This also is a good indicator that corrective action is needed from the teacher (Palinscar & Brown, 1984). Teachers must explicitly show students how to write a summary, which means teaching them to include the story elements and the sequence of events for fiction. For nonfiction, students need to be able to include the main idea and supporting details. If students do not accurately demonstrate an understanding of the text through their writing, the benefits of summary writing on comprehension and comprehension monitoring may be hindered (Spirgel & Delaney, 2016). However, research has shown that if students write about a particular event or fact they read about they will better retain that information (Spirgel & Delaney, 2016). It has also been show that when summary writing is conducted along with other reading comprehension strategies, the benefits improved reading performance considerably (Pirc & Pecjak, 2018).

Comprehension Monitoring

Comprehension monitoring is a complicated skill. However, building this skill in the early stages of reading is a good predictor of reading comprehension in the third grade, as researched by Yeomans-Moldonado (2017). She discovered that comprehension monitoring was

a better predictor than decoding, vocabulary, and working memory. It is her recommendation that young children should be explicitly taught how to monitor their own comprehension. A reader's ability to monitor comprehension is reliant on their judgment that the text does not make sense and it involves deliberately reflecting on their understanding. Successful readers who monitor comprehension can also identify when they do not know the meaning of key words due to lack of background knowledge (Yeomans-Maldonado, 2017).

There would be no benefit to reading if one did not monitor one's comprehension. In order to determine if comprehension is improving efficiently, readers need to periodically stop and check if they are retaining the information (Palinscar & Brown, 1984). This step is important to regulate reading and is revealed when readers plan and use the information to discern what they read (Kolić-Vehovec & Bajšanski, 2006). When meaning begins to break down, accomplished readers enlist various actions in order to self-correct their understanding (Dorn & Soffos, 2005). A proficient reader understands why and when to utilize different reading strategies and that these strategies are contingent on the intention of reading (Gutiérrez-Braojos et al., 2014). Generally, poor comprehenders lack the ability to monitor comprehension. They do not realize when comprehension has broken down and therefore they do nothing to repair it. This ability of to self-monitor comprehension is imperative for reading comprehension (Tomczak, 2014).

Comprehension monitoring is a metacognitive skill because one is carefully reflecting on one's own thinking (Yeomans-Maldonado, 2017). The improved development and changes in comprehension monitoring along with using comprehension strategies start when students become aware of their own mental processes and ultimately advance into more multifaceted metacognitive skills (Kolić-Vehovec & Bajšanski, 2006). The ability to self-monitor one's

learning begins during elementary school and is determined by personal methods along with behaviors and other influences within one's environment (Annevirta & Vauras, 2006).

Instructional Methods

The use of the think-aloud procedure asks the students to periodically respond to their thinking while reading. It helps students to become more aware of the processes they are using while reading and can boost their reading comprehension (Klingner, 2004). The teacher or an experienced reader should explicitly model the think-aloud procedure so students know what is expected. With think-alouds, students can see a demonstration of inferring, predicting, asking questions, and summarizing what they have read. When teachers model the inner conversations they have, students can see how skillful readers think (Harvey & Goudvis, 2007). These responses can be enhanced through writing, which is often a neglected instrument for improving reading comprehension (Hebert et al., 2013).

Conclusion

The ability to monitor comprehension and build higher-level thinking is critical for today's students. If they lack the capability to use strategies and understand when there is break down in comprehension, these students will continue to struggle with successfully reading (Özyeter & Kutlu, 2018). Third grade is an important grade to begin developing this metacognitive awareness of reading strategies. Teachers should explicitly teach and model comprehension strategies and allow students to implement these strategies with texts that are at their instructional level. The comprehension strategies should not be taught in isolation. The teacher should also explicitly teach students how to monitor their own comprehension and use strategies to build metacognition before, during, and after reading (Cobb, 2016).

Methods

Participants

This action research was conducted in a third-grade classroom consisting of 20 students. There were eight girls and twelve boys. Of these students, six were English Language Learners, six were receiving Title I services for reading, one student participated in the Talented and Gifted program, and none of the students were on an Individualized Educational Plan (IEP). The student demographics consist of mostly Caucasian, with 30% Hispanic, and 5% African American. Also, 35% of the students qualified for free and reduced lunch.

Data Collection

For this action research project, students were first assessed to find their instructional reading level through the use of running records provided by Reading A-Z. The leveling system from Reading A-Z is based on qualitative and quantitative measures as well as considerations of the reader and follows the guidelines set forth by the Common Core State Standards with regard to text complexity (“Learning A-Z Text Leveling System,” n.d.). Reading A-Z takes into account qualitative measures such as support from illustrations, predictability of text, text organization and structure, cognitive demands, along with quantitative measures such as total word count, sentence length and complexity, and the ratios of high and low frequency words (“Learning A-Z Text Leveling System,” n.d.). The levels are on a gradient system starting at level AA and becoming more complex through to level Z. Students read aloud a passage from Reading A-Z at their approximate reading level while this teacher researcher took notes and checked for their instructional reading level accuracy of 90% to 94% words read correctly. Accuracy of 95% or higher is considered an independent level, while accuracy of 89% or lower would be considered a frustrational level.

Then the students were each assigned a collection of books from Raz-Kids based on their personal instructional reading level. Raz-Kids is an online app from Reading A-Z that includes e-books and comprehension quizzes. Raz-Kids provides a collection of books at each instructional level with a variety of both fiction and nonfiction. This allowed students to choose books of interest to them yet the teacher researcher was assured that the texts that were read were at the appropriate level. By using the Raz-Kids app, this teacher researcher was able to easily find the books that were read to check if the summaries and other responses the students wrote were accurate for each text.

This action research project lasted for ten weeks. The students were given 15 minutes each day to read the e-book, complete the reading response activities, and take the comprehension quiz. The students chose one book a week from a variety of fiction and informational texts that Raz-Kids provided at each reading level. The students then completed a reading response sheet for each book. The reading response consisted of writing a prediction before reading the book, asking questions and visualizing during and after reading, and summarizing the book after reading (Appendix A). When the students completed the reading response worksheet, they took a comprehension quiz provided by Raz-Kids.

The data collected was the scores of each reading response based on a teacher created rubric (Appendix B), the scores of the comprehension quizzes, and the results of their Spring aimswebPlus Universal Screening. The students took the Winter aimswebPlus Universal Screening during the third week of January. Approximately four weeks later, the students' text levels were tested and this teacher researcher began to model how to complete the reading responses, which included using think-alouds and asking why questions. The students began

their own reading responses on the following week and continued until the end of April. The Spring aimswebPlus testing began immediately after the ten-week period.

Since there was not any previous data for the reading responses or the Raz-Kid comprehension quizzes, this teacher researcher chose to compare the scores of the rubric and quizzes from the first five weeks of the intervention to the last five weeks of the intervention to look for growth in scores. The scores from aimswebPlus reading comprehension in the Winter were also compared to the scores from the Spring screening. The students' rate of improvement during that assessment period was also compared to the national rate of improvement based on students of similar levels. The national rate of improvement varied for each student based on their previous aimswebPlus reading comprehension scores and how they compared to other students around the nation. The goal is for the students' rate of improvement to be equal to or greater than the national rate of improvement. This teacher researcher was particularly interested in the aimswebPlus scores because the students would be reading without the use of the response activities indicating they were using the comprehension strategies and higher order thinking independently.

After the students completed a reading response worksheet, the quality of the responses were evaluated and scored based on a rubric that was teacher created, making this both qualitative and quantitative data. The only measure that had established validity and reliability was aimswebPlus. This universal screening system provides performance and growth measures for kindergarten through eighth grade students' reading and math proficiencies (Edwards, 2018). According to the *Efficacy Research Report*, when determining reliability for reading comprehension of third grade the Cronbach's alpha coefficient mean was 0.87 (Edwards, 2018). The mean predictive validity coefficient for the third grade reading composite was 0.77

(Edwards, 2018). The mean concurrent validity coefficient for the third grade reading composite was 0.77 (Edwards, 2018).

Findings

Data Analysis

A qualitative and quantitative data analysis of the reading response activities was measured using a rubric. The scores were calculated giving two points as a maximum per strategy. This resulted in a total of ten maximum points available per strategy for both the first five-week period and the second five-week period. The individual scores for each period are given in Table 1. While the mean scores show growth for each reading strategy, it is only by a little more than one point. Some of the students did not make improvement in certain areas. Four of the students did not make improvement in making predictions. Four other students did not improve with visualizing. Six students did not make gains with writing summaries. Questioning was an area where the fewest number of students improved. Only eleven of the twenty students made improvements, however three of those students made a five-point gain in asking questions.

Table 1

Rubric Scores for Reading Responses

Student	Predicting		Questioning		Visualizing		Summarizing	
	WK 1-5	WK 6-10	WK 1-5	WK 6-10	WK 1-5	WK 6-10	WK 1-5	WK 6-10
1	8	8	5	6	5	9	5	6
2	9	10	9	7	10	9	7	9
3	6	7	8	6	10	9	6	8
4	6	7	7	6	7	8	5	5
5	10	10	9	6	7	10	8	9
6	9	10	7	7	9	10	6	9
7	5	10	5	6	8	10	6	9
8	7	7	5	5	7	9	5	7
9	8	10	8	8	7	9	8	8
10	10	10	6	10	9	10	7	7
11	9	10	7	6	9	10	7	8
12	8	10	5	9	7	9	5	6
13	8	10	5	10	7	10	7	6
14	8	10	5	10	8	10	5	6
15	9	8	6	8	9	10	5	7
16	8	10	6	9	10	9	6	6
17	10	10	5	10	9	10	8	9
18	6	8	5	5	6	7	5	7
19	7	9	5	7	9	9	5	6
20	7	6	7	9	5	7	6	5
mean	7.9	9	6.25	7.5	7.9	9.2	6.1	7.15

The reading response scores were combined for all areas and were then totaled up for each five-week period with a maximum of 40 points. The total scores are included in Table 2.

The scores from the first five weeks were then compared to the second five-week period. Only

students 2 and 3 had their scores stay the same from one period to the next, while all the other students improved. Four of the students made great gains of nine points or more.

Table 2

Rubric Scores for All Reading Responses

Student	Weeks 1-5	Weeks 6-10	Growth
1	23	29	6
2	35	35	0
3	30	30	0
4	25	26	1
5	34	35	1
6	31	36	5
7	24	35	11
8	24	28	4
9	31	35	4
10	32	37	5
11	32	34	2
12	25	34	9
13	27	36	9
14	26	36	10
15	29	33	4
16	30	34	4
17	32	39	7
18	22	27	5
19	26	31	5
20	25	27	2

A dependent groups *t* test revealed that there was a statistically significant difference in rubric scores for the response activity during the first five weeks ($M = 28.15$, $SD = 3.80$, $n = 20$), as compared to rubric scores for the response activity during the last five weeks ($M = 32.85$, $SD = 3.69$, $n = 20$) following a reading intervention with strong effect size, $t(19) = -6.48$, $p < .05$, $d = -1.45$. On average there was a 4.7 point difference between the groups.

For the reading comprehension quiz scores from Raz-Kids, the student totals are displayed in Table 3. The quantitative data scores from the first five weeks of the intervention are compared to the scores of the second five weeks. Each quiz was worth 10 points for a possible total of 50 points for each five-week period. When comparing the scores from the five-week periods, fifteen of the students made growth in their scores.

Table 3

Raz-Kids Comprehension Quiz Scores

Student	Weeks 1-5	Weeks 6-10	Growth
1	19	35	3.2
2	26	35	1.8
3	31	33	0.4
4	28	37	1.8
5	29	35	1.2
6	28	41	2.6
7	28	28	0
8	34	34	0
9	27	31	0.8
10	41	42	0.2
11	34	44	2
12	25	36	2.2
13	27	41	2.8
14	17	30	2.6
15	28	34	1.2
16	26	24	-0.4
17	38	39	0.2
18	32	26	-1.2
19	29	29	0
20	14	18	1

A dependent groups *t* test revealed that there was a statistically significant difference in Raz-Kids comprehension quiz scores during the first five weeks ($M = 28.05$, $SD = 6.26$, $n = 20$), as compared to Raz-Kid comprehension quiz scores during the last five weeks ($M = 33.6$, $SD = 6.35$, $n = 20$) following a reading intervention with strong effect size, $t(19) = -4.07$, $p < .05$, $d = -0.91$. On average there was a 5.55 point difference between the groups.

To see improvement in the use of reading comprehension strategies when reading independently, this teacher researcher used quantitative data from the aimswebPlus Universal Screening for reading comprehension. The scores from the Winter screening that was taken four weeks before the intervention were compared to the scores from the Spring screening that was taken after the last week of the intervention. Table 4 shows the data. All of the students, except student 2, improved on the Spring screening compared to the Winter screening. Some students made little growth while others made significant growth.

Table 4

AimswebPlus Reading Comprehension Scores

Student	Winter	Spring	Growth
1	180	206	26
2	176	167	-9
3	130	167	37
4	145	149	4
5	185	193	8
6	197	214	17
7	185	187	2
8	145	160	15
9	197	223	26
10	230	233	3
11	197	206	9
12	153	187	34
13	160	167	7
14	157	178	21
15	176	178	2
16	153	167	14
17	185	214	29
18	164	170	6
19	136	149	13
20	160	170	10

A dependent groups *t* test revealed that there was a statistically significant difference in the Winter aimswebPlus reading comprehension scores ($M = 170.55$, $SD = 24.10$, $n = 20$), as compared to the Spring aimswebPlus reading comprehension scores ($M = 184.26$, $SD =$

23.91, $n = 20$) following a reading intervention with strong effect size, $t(19) = -5.11, p < .05, d = -1.14$. On average there was a 13.7 point difference between the groups.

In order to take into account the natural rate of improvement in which students may go through, aimswebPlus provides a national rate of improvement for students based on their scores from the beginning of the year. These scores are individualized per student based on how they compare to other students at their same level around the nation. As previously stated, the goal is for students to have an individual rate of improvement at or above the national rate of improvement. Table 5 demonstrates the quantitative data taken for each student. The difference between the student rate of improvement and national rate of improvement is also noted.

Table 5

AimswebPlus Reading Comprehension Rate of Improvement (ROI)

Student	Student ROI (Winter to Spring)	Nat'l ROI (Winter to Spring)	Difference Student ROI vs. Nat'l ROI
1	1.82	0.19	1.63
2	-0.63	0.19	-0.82
3	2.59	1.09	1.5
4	0.28	0.54	-0.26
5	0.56	0.19	0.37
6	1.19	-0.25	1.44
7	0.14	0.19	-0.05
8	1	0.54	0.46
9	1.73	-0.25	1.98
10	0.21	-0.37	0.58
11	0.63	-0.25	0.88
12	2.38	0.54	1.84
13	0.49	0.19	0.3
14	1.47	0.19	1.28
15	0.14	0.19	-0.05
16	0.98	0.54	0.44
17	2.03	0.19	1.84
18	0.42	0.19	0.23
19	0.87	1.09	-0.22
20	0.67	0.19	0.48

A dependent groups *t* test revealed that there was a statistically significant difference in student rate of improvement from Winter aimswebPlus screening to Spring aimswebPlus screening ($M = .95$, $SD = .81$, $n = 20$), as compared to the national rate of improvement from Winter aimswebPlus screening to Spring aimswebPlus screening ($M = .26$, $SD = .38$, $n = 20$) following a reading intervention with strong effect size, $t(19) = 3.81$, $p < .05$, $d = .85$. On average there was a .69 point difference between the groups.

Discussion

Summary of Major Findings

The findings of this action research were compatible with the existing body of research in that the use of reading comprehension strategies appeared to show an increase in reading comprehension abilities. These four specific comprehension strategies: predicting, questioning, visualizing, and summarizing seemed to assist with monitoring comprehension and building metacognition. This was consistent across all three methods of data collection, indicating that there was a strong effect size. While each area of data collection showed significant improvement in reading comprehension, further research should be conducted. With consideration to this data there is no way to tell if one particular reading response activity improved comprehension or if it was a combination of all the activities together. Based on student growth in the aimswebPlus reading comprehension assessment scores, as well as an increased individual rate of improvement as compared to the national rate of improvement, it would appear that the use of the reading responses possibly improved the students' metacognitive awareness of using the strategies when the response activities were not present.

It should be noted that while all of the students with the exception of Student 2 improved in their reading comprehension scores from aimswebPlus (Table 4), Students 4, 7, 15, and 19 had a lower rate of improvement compared to the national rate of improvement provided by aimswebPlus (Table 5). Therefore, even though the statistical analysis showed a significant improvement for the population, not all students improved as expected.

Limitations of the Study

There were some influential factors that could have had an impact on the data. One factor was student behaviors. Based on anecdotal observations by this teacher researcher,

students 14 and 20 seemed to rush through the response activities and comprehension quizzes or struggled to get them completed. After some additional modeling of the reading responses from this teacher researcher, they improved during the second five-week period. They both also improved from Winter to Spring on the aimswebPlus assessment, but perhaps that improvement could have been more pronounced if they were more motivated to complete the tasks. Student 2 struggled with test anxiety. That student had a negative rate of improvement from the Winter to Spring assessment period. It is difficult to tell if it was due to the intervention having a negative effect or anxiety.

There is also the factor of the scores from the aimswebPlus assessment at beginning of the school year which may have been lower due to the summer slide effect where students regress some after not reading or reading very little during the summer months. This would influence their national rate of improvement. Also, if students were having a bad day, not feeling well, or were tired during the assessment day, that may also affect the aimswebPlus scores. It was one assessment on one day.

A limitation to this study is that there was no control group. There was a change in this teacher researcher's grade level so there was no third grade data from the previous year to be able to compare the growth of the aimswebPlus assessment results without the use of reading response activities to the growth of the aimswebPlus assessment results with the use of the reading response activities from the same Winter to Spring time period. The small group size is also a limitation. A larger population may have yielded different results. There also needs to be consideration for the time allotted for the action research. Perhaps if more time were given to modeling, guided practice, and the gradual release of responsibility, the results would have been even greater.

Further Research

As mentioned previously, an area for further research could be to determine if one comprehension strategy has a greater impact on reading comprehension than another. One item to consider would be if adding more strategies, such as inferring or synthesizing, would influence scores. The way the current action research was structured, it is difficult to tell if one produced more positive results than another on the overall reading comprehension

Another area for further research could be the use of a traditional text versus a digital text. All the students in this action research used fictional and informational digital texts for their ten books. A question to consider would be if traditional texts would show a higher rate of improvement than digital texts. The aimswebPlus reading passages were given to students digitally on their iPads, but were much shorter than the texts that they read for their reading responses.

Having students self-reflect on how well they comprehended the texts and how well they felt they did on completing the reading response activities could also be an area for further research. It would be good to know if the students themselves felt that the reading response activities were beneficial to their understanding. This would also allow the students to take more ownership in their learning. If this action research were to be repeated, this teacher researcher would include a survey for self-reflection.

Conclusion

Based on the data results from this action research, the use of reading response activities could have a positive impact on reading comprehension and comprehension monitoring abilities. The data this teacher researcher used was from the teacher created reading response rubrics, comprehension quizzes provided by Raz-Kids, and the results from the reading comprehension portion of aimswebPlus Universal Screening assessments. By encouraging the students to think more deeply about the texts they read through completing the written reading response activities, they were given the opportunity to build their metacognitive and comprehension skills. The reading response activities of predicting, questioning, visualizing, and summarizing were used before, during, and after reading which possibly made the students dig deeper into the texts to pull out the meaning the authors intended. These four strategies have a body of research that shows they can improve reading comprehension. The strategies of predicting, questioning, and summarizing were particularly noted to build comprehension-monitoring skills (Palinscar & Brown, 1984). The strategy of visualizing helps the reader become more engaged in the text (Harvey & Goudvis, 2007).

The purpose of this action research was to determine if the use of written reading responses were effective in improving the reading comprehension and comprehension monitoring skills of this teacher researcher's third grade students. Based on observations and data from the aimswebPlus Universal Screening, the students in this teacher researcher's class were in need of an intervention to improve the ability to understand what was read. While the overall data statistically shows improvement in comprehension, not all students improved. However, 75% of the students had a higher rate of improvement on the aimswebPlus reading comprehension assessment than the national rate of improvement for similar students.

The importance of these findings may be useful to other elementary classrooms. The reading response activities could be changed and adapted to fit various grade levels and reading competencies. It is recommended by this teacher researcher that students be allowed a choice in the texts they read as long as they are at the readers' instructional level. These reading response activities could be used with any text and may be useful for content area reading. This research is valuable because it provides teachers with another tool to help develop reading comprehension and comprehension monitoring skills, which will benefit readers throughout their lifetime.

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Appendix A

Reading Response Worksheet

Name: _____ Date: _____
Title: _____ F / NF

Predict:
Before you begin reading, write down what you think the text will be about.

Ask Questions:
While you are reading, write down any questions you have about the text.

1. _____

2. _____

3. _____

Visualize:
Sketch and/or write about what this text means to you.

Summarize:
Write a quick summary about the text.

Rate this book: ☆☆☆☆☆

Appendix B

Reading Response Worksheet Rubric

Name:

Reading Response Rubric

<u>Wk</u>	Predicts	Questions	Visualizes	Summarizes
1	0- No response or "I don't know." 1- Prediction is not substantiated with text or is too simple. 2- Prediction is consistent and logical with text.	0- No response or an unrelated question(s). 1- Literal question(s) with short answer. 2- Higher-order question(s) that represents complex thinking about text.	0- No response. 1- Image is unrelated to text or basic. 2- Image is closely matched with text and further clarifies complex ideas or anomalies.	0- No response or incorrect. 1- Recalls some events in random order. 2- Recalls main idea and details in sequence.
2	0- No response or "I don't know." 1- Prediction is not substantiated with text or is too simple. 2- Prediction is consistent and logical with text.	0- No response or an unrelated question(s). 1- Literal question(s) with short answer. 2- Higher-order question(s) that represents complex thinking about text.	0- No response. 1- Image is unrelated to text or basic. 2- Image is closely matched with text and further clarifies complex ideas or anomalies.	0- No response or incorrect. 1- Recalls some events in random order. 2- Recalls main idea and details in sequence.
3	0- No response or "I don't know." 1- Prediction is not substantiated with text or is too simple. 2- Prediction is consistent and logical with text.	0- No response or an unrelated question(s). 1- Literal question(s) with short answer. 2- Higher-order question(s) that represents complex thinking about text.	0- No response. 1- Image is unrelated to text or basic. 2- Image is closely matched with text and further clarifies complex ideas or anomalies.	0- No response or incorrect. 1- Recalls some events in random order. 2- Recalls main idea and details in sequence.
4	0- No response or "I don't know." 1- Prediction is not substantiated with text or is too simple. 2- Prediction is consistent and logical with text.	0- No response or an unrelated question(s). 1- Literal question(s) with short answer. 2- Higher-order question(s) that represents complex thinking about text.	0- No response. 1- Image is unrelated to text or basic. 2- Image is closely matched with text and further clarifies complex ideas or anomalies.	0- No response or incorrect. 1- Recalls some events in random order. 2- Recalls main idea and details in sequence.
5	0- No response or "I don't know." 1- Prediction is not substantiated with text or is too simple. 2- Prediction is consistent and logical with text.	0- No response or an unrelated question(s). 1- Literal question(s) with short answer. 2- Higher-order question(s) that represents complex thinking about text.	0- No response. 1- Image is unrelated to text or basic. 2- Image is closely matched with text and further clarifies complex ideas or anomalies.	0- No response or incorrect. 1- Recalls some events in random order. 2- Recalls main idea and details in sequence.
	/10	/10	/10	/10