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Title: The Effects of Teaching a Text-Structure Based Reading Comprehension Strategy on Struggling Fifth Grade Students' Ability to Summarize and Analyze Written Arguments

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Presentation ID #: 230

Abstract

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Background: In today's society it is essential to be able to read fluently, particularly, expository and argumentative texts (Chambliss, 1995; Gresten, Fuchs, Williams, & Baker, 2001). Accrued research indicates that critical reading of argumentative text is important not only for succeeding on high-school and college assignments (such as critical analysis of literary text, debates, and research papers) but also for making real-life decisions (for example, from buying consumer products to electing a political candidate; Knudson, 1992; Larson, Britt, & Larson, 2004). Further, McCann (1989) stated, "Argument is an essential instrument for a free society that deliberates about social, political and ethical issues" (as cited in Knudson, 1992; p. 170). Despite the importance of comprehending argumentative text, the research indicates that extended arguments in persuasive essays are not easily comprehended by students (Chambliss, 1995).

The researchers have indicated several reasons that explain this difficulty in comprehending expository or argumentative text (Sanez & Fuchs, 2001; Chambliss, 1995). One of the reasons for poor understanding of argumentative text is that often students are not exposed to reading materials that include extensive arguments (Chambliss, 1995). A second reason is that argumentative text is inherently difficult because unlike narrative text, argumentative text is often embedded in other genre (i.e., informational or narrative text), and thus, it is difficult for the students to navigate through the text to figure out the author's argument. A third reason is that often a reader has to simultaneously juggle many skills to fully comprehend an author's argument. Some of those skills are: (a) ability to recognize the author's argument (i.e., author's claim, supporting reasons, and evidence); (b) ability to bracket biases or preconceived notions and read the author's argument with an open mind; and (c) ability to evaluate, question and critique written arguments (i.e., is the reason relevant, truly supporting the position, what makes it a good reason, etc.). In other words, young students believe that most written texts are true and fail to question the author's argument.

Although research has investigated persuasive writing instruction, there has been a lack of instructional research on reading argumentative text that specifically addresses the development of critical and analytical understanding of written arguments in school-age children. In short, comprehension of argumentative text is highly complex, and there is a need for research on instruction in how to critically analyze written arguments. Thus, the purpose of the proposed presentation is to present the findings about the effectiveness of teaching students with reading difficulties a genre-specific strategy for understanding and analyzing written arguments.

Purpose of study: The purpose of this research was to examine the effectiveness of teaching fifth grade students with reading difficulties a genre-specific strategy for summarizing and critically analyzing written arguments. In addition, this research explored whether learning this particular reading strategy informed the students' ability to write effective and convincing persuasive essays. The researcher developed reading comprehension strategy named *critical analysis of argumentative text* (CAAT) that guided students in identifying the structural elements of written argument, summarizing, and critically analyzing the content of the argument. The instruction was intended to enhance students' analytical and critical reading skills.

Setting/ Participants: A total of seven fifth grade students with reading comprehension difficulties from the inner city school in the Mid-Atlantic region participated in the study. The reading specialist identified ten students who had difficulties in reading comprehension. Further, the students were screened for comprehension risks. Out of ten students, eight students scored at instructional level (i.e., between 90% and 97%) on oral reading passage and frustration level for comprehension questions (i.e., 60% or below) for fourth grade level text from Qualitative Reading Inventory (Leslie & Caldwell, 2005). Initially there were eight participants and they were divided into four pairs for instructional purposes. However, one student was dropped out of the study because of the behavior issues. Thus, the fourth pair was dissolved and one student from the fourth pair was instructed along with the third pair. Each pair received genre-specific comprehension instruction for 35 to 40 minutes three times per week for seven weeks.

Intervention: The *Critical Analysis of Argumentative Text (CAAT)* strategy used in this investigation is influenced by Chambliss' (1995) comprehension model. The Chambliss' (1995) model facilitated readers to comprehend written arguments and it consisted of three stages: (a) recognizing an argument; (b) identifying elements of argument (i.e., claim and evidence); and (c) constructing the gist of a written argument (Chambliss, 1995). However, in this investigation, the reading comprehension strategy *CAAT* not only guided students to identify elements of argument, but it also helped them to summarize and critically evaluate written arguments. In short, this strategy was an attempt to combine underlying aspects of comprehension (i.e., identifying, summarizing, and analyzing) and structural elements of argumentative text.

The CAAT strategy was divided into six major steps: (a) Step 1: focused on setting the purpose for reading argumentative text and bracketing biases; (b) Step 2: read the text carefully; (c) Step 3: identified, underlined and labeled parts of the argument (e.g., author's position on a topic, reasons, evidence, opposite view, rebuttal and conclusion); (d) Step 4: focused on summarizing the argument (i.e., including important elements and excluding minor details); (e) Step 5: aimed at analyzing author's overall argument (e.g., whether the author's reasons are strong; whether the author's argument is convincing); and (f) Step 6: asked readers' to present their views and supporting reasons on a given topic.

The CAAT strategy instruction was comprised of 21 sessions. Each session lasted for 35 to 40 minutes and they were divided into following ways: (a) Sessions 1-4: focused on developing background knowledge for persuasive genre, differences between persuasion and argumentation, bracketing biases and other related topics; (b) Sessions 5-7-: emphasized on demonstrating, practicing, and reviewing CAAT strategy; (c) Sessions 8-18: aimed at teaching each step of the strategy with variety of examples/non-examples, provided practice to master each step, and focused on in-depth dialogic discourse about the argumentative text; and (d) Sessions 19-21: intended to bring it altogether for the readers and provided ample practice to master identifying, summarizing and analyzing skills.

The investigator taught the CAAT strategy using strategy instruction and self-evaluation procedures that were based on Graham and Harris's (1989; 1999) suggestions for effective strategy instruction. In addition, the design of the instruction also drew upon ideas from Beck and colleagues "Question the Author" approach (Beck, McKeown, Hamilton, & Kucan, 1997). Furthermore, the investigator utilized scripted lesson plans, self-evaluation forms, experimenter-

created persuasive essays, examples/non-examples to amplify the parts of argument, handouts, activity packets, and question cue cards to support students' learning. During instructional sessions, the investigator explained and demonstrated how to utilize the CAAT strategy to identify, summarize, and critically analyze an argument. In short, the CAAT comprehension strategy instruction was structured, systematic and utilized visual teaching aids to improve students' understanding about argumentative text.

Research Design: The proposed investigation utilized a multiple baseline design with multiple probes across paired participants. The single subject design involved several phases such as baseline, intervention, posttest, and maintenance. In addition, the investigator included pre-baseline phase to briefly review parts of argument, persuasive text, and assessment procedures, in case the students were unfamiliar with persuasive genre. The baseline data was compared to posttest data of each individual student and thus the design itself "demonstrated experimental control using one person as both the control and experimental participant" (Kenndy 2005). The criterion measure (i.e., Argument Assessment Analysis) was administered to measure students' ability to summarize and critically analyze the written arguments. However, the summary score were considered to establish a stable baseline. In this design, the effects of instruction are demonstrated when each pair maintains a stable baseline and improves only after instruction is provided.

Data Collection: *Reading Comprehension Assessment: Argument Analysis Assessment (AAA)*. An experimenter-created curriculum-based assessment was individually administered in a school setting. Each student was asked to read argumentative text, while reading they could take notes or underline parts of argument. Then, they were asked to verbally summarize (i.e., include important parts of argument and exclude minor details) and analyze (i.e., state whether overall argument was convincing or not. Why?) the written arguments. The student's summary and critical analysis of texts were audio taped for scoring and analysis purposes. For the assessment, the investigator developed 12 controlled argumentative text (such as "Should Pluto be a planet?") at 5th grade level of 250 to 350 words that included parts of argument (i.e., author's position, reasons, evidence, opposing position, rebuttal and conclusion). The argumentative texts were utilized as an assessment probe during baseline, posttest and maintenance phase.

The analytical scoring procedures used for analyzing summaries were influenced by Midgette, Haria, and MacArthur (2008). It rated the important elements of argument (position, reason, evidence, opposing position, and rebuttal) that were included in a summary. Each element score ranged from zero-to-two (0- no response and 2-complete, clear and accurate response) except evidence score ranged from (0- no response and 1- include relevant information). The student summaries received maximum score of 12 points and minimum of zero. In addition, the investigator separately counted non-functional units (i.e., minor details, irrelevant information, description, extra information) that were present in the summary. The non-functional units weaken the summary. Therefore, lower the number of non-functional units, better is the summary. Further, the investigator also examined the quality of summary. The overall summary score ranged from zero-to-three (0- irrelevant response; 3- clear, and succinct summary with few or no minor details).

Further, the scoring procedures developed for critical analysis aspect of reading comprehension were based on pre-defined criteria for arguments that were partially influenced by Ferretti,

MacArthur, & Dowdy, (2000), Grice's (1975) Cooperative Principle and maxims (i.e., the principle of clarity, honesty, efficiency and relevance), and Blair and Johnson's (1987) three criteria (i.e., relevance, acceptance and sufficiency). Overall scoring guide was created to capture how students critiqued and analyzed a given argumentative text. The scores ranged from zero-to-four (0-no response/irrelevant response; 4- fully developed response with elaborate explanation). The students received maximum of four points and minimum of zero.

In addition, the investigator administered another part of reading comprehension known as the *Identification of Elements in Written Argument (IEWA)*. It measured students' ability to accurately identify and explain important parts of written arguments. This measure was administered only once during each phase to avoid practice effect. The purpose of administering this test was to understand whether students could successfully identify parts of argument and explain their reasons. The scoring procedures for this part considered correct (1 point) or incorrect (0 point) identification of parts of argument and the scoring for explanation ranged from Zero-to-two (0- no response; 2- correctly/fully explained) for each element.

 Persuasive Writing Assessment. Students wrote persuasive essays in response to prompts. The prompts and scoring procedures are modeled on previous research (Ferretti, MacArthur, & Dowdy, 2000; Midgette, Haria, & MacArthur, 2008). The students were asked to plan and write a persuasive essay on a given persuasive writing prompt. The students will write two essays during baseline and two during the posttest phase. The topics were randomly selected from the pool of 12 topics. The students' essays were rated on a 7-point *primary trait scale for overall persuasiveness n writing* (ranging from 0- no response/irrelevant response; 7- fully elaborate persuasive essay). In addition, the scorers rated the essays using analytic scales called *Elements of Persuasive Discourse* for structural elements of persuasive discourse content (position, reasons, evidence, coherence) and audience awareness (opposing position, rebuttal) aspect of the essay. The score for each persuasive element ranged from zero-to-two. The content part fetched total of 12 points and audience awareness fetched four points. In all, the students may receive 16 points.

The pre-post metacognitive interview was conducted to understand whether students are aware about their own reading and writing processes, skills and attitudes. The responses were typed and common themes were categorized and coded. The data for interview will be ready for the presentation.

Data Analysis. The reading comprehension tests were transcribed by first author and scored by two trained retired schoolteachers. Similarly the written essays were typed by first author and scored by two trained schoolteachers. The author graphed the data and visually analyzed the data to determine the effects of intervention on students' ability to summarize and analyze written arguments.

Findings: *Reading Comprehension Scores. Analytic Summary Scores.* All seven students made gains in analytical scores for reading summary from baseline to posttest (See Table 1). Student established stable baseline with mean scores ranging from 2.1 to 4.3. All posttest scores were higher than all baseline scores with mean scores ranging from 9.3 to 11.3. Thus, the percent of non-overlapping data (PND) was 100%. (PND is often considered in multiple baseline design as a measure of overall magnitude of effects analogous to effect size in group designs.) Scores were

maintained at one month for first two pairs. At two months, scores for the first pair declined somewhat but remained much above baseline performance.

Overall Quality Scores for Summary. All students made gains in overall quality (see Table 1). The mean scores for baseline for individual students ranged from 0.0 to 0.3 on a scale from 0 to 3. The student made substantial progress from baseline to posttest. The mean gains in overall quality for posttest ranged from 1.8 to 3.0. At one month interval, the first two pair maintained their scores. However, at two months interval, there was a slight drop in overall score for first pair. But the scores in second maintenance phase were still higher than the baseline.

Overall Scores for Critical Analysis. All seven students showed progress on overall critical analysis measure (see Table 1). Gains in mean scores from baseline to posttest for individual students ranged from 1.0 to 3.3 on a scale from 0 to 4. PND for critical analysis was 100%. These results suggest that a well integrated comprehension strategy was quiet effective for at risk fifth grade students on their ability to summarize and analyze complex argumentative text.

Writing Scores. Elements of Persuasive discourse. Six students improved on analytical scores from baseline to posttest. Only, Quincy's scores dropped from baseline (9.5) to posttest (6.2). Gains in mean score from baseline to posttest for the other six students ranged from 4.5 to 15.5 on a scale from 0- 16 (see Table 2). Though, the students were not provided direct instruction in writing effective persuasive essays, most students improved on elements of persuasive discourse scale.

Primary Trait Scale for Overall Persuasiveness. The scores did not reflect gains from baseline to posttest. Mary and Jessica showed progress from baseline to posttest. On the other hand, Tony and Sean scores did not change from baseline to posttest. Annie and Quincy declined in their scores from baseline to posttest (see Table 2). For writing scores, it was understandable that students did not make substantial gains as the investigator did not teach how to write persuasive essay and also did not point out the connection between reading and writing.

Conclusions: The results indicate that genre-specific comprehension strategy improved students' ability to summarize and critically analyze complex argumentative texts. Results are particularly noteworthy given that substantial gains were made with modest levels of instruction. The strategy instruction was implemented only 3 times a week for 35 minutes and the students were exposed to complex reading comprehension task of identify, summarizing and analyzing complex argumentative text. Overall results support that if students are given opportunity to explicitly learn comprehension strategies, engage in meaningful dialogical discourse to understand different perspectives, and critically analyze argumentative text, then they may develop a deeper understanding of the text.

Appendix A. References

Blair, J. A., & Johnson, R. H. (1987). Argumentation as dialectical. *Argumentation*, 1 (1), 41-56.

Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L. (1997). Questioning the author: An approach for enhancing student engagement with text. Newark, DE: IRA.

Chambliss, M.J. (1995). Text cues and strategies successful readers use to construct the gist of lengthy written arguments. *Reading Research Quarterly, 30*, 778-807.

Ferretti, R. P. MacArthur, C. A. & Dowdy, N. S. (2000). The effects of an elaborated goals on the persuasive writing of students with learning disabilities and their normally achieving peers. *Journal of educational psychology, 90,* 694-702.

Graham, S. & Harris, K. (1989). Components analysis of cognitive strategy instruction: Effects on learning disabled students' composition and self-efficacy. *Journal of educational psychology, 81, 353-361.*

Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S., (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research, 71,* 279-320.

Kennedy, C. H. (2005). Single-Case Designs for educational research. New York: Allyn and Bacon.

Knudson, R.E. (1992). Analysis of argumentative writing at two grade levels. *Journal of Educational Research, 85*, 169-179.

Larson, M., Britt, M.A., & Larson, A.A. (2004). Disfluencies in comprehending argumentative texts. *Reading Psychology, 25*, 205-224.

Leslie, L. & Caldwell, J. (2005). *Qualitative Reading Inventory (4th ed).* New York: Pearson.

McCann, T.M. (1989). Student argumentative writing knowledge and ability at three grade levels. Research in Teaching of English, 23, 62-72.

Midgette, E., Haria, P., & MacArthur, C.A. (2008). The effects of content and audience awareness goals for revision on the overall persuasiveness of fifth and eighth grade students' argumentative essays. *Reading and Writing: An Interdisciplinary Journal.* 21, 131-151.

Saenz, L. M. & Fuchs, L. S. (2002). Examining the reading difficulty of secondary students with learning disabilities: Expository versus narrative text. *Remedial and Special Education*, 23, 31-41.

Appendix B. Tables and Figures

Table 1

Mean Scores by Phase for Reading Summary and Critical Analysis

Student Phase (# Text)	Analytical Score for Summary	Overall Score for Summary	Overall Score for Critical Analysis
Tony			
Baseline (3)	2.7	0.0	1.0
Posttest (3)	9.3	1.8	2.6
Maintenance (2)	7.0	1.0	2.5
Annie			
Baseline (3)	4.3	0.3	1.0
Posttest (3)	10.0	2.0	1.7
Maintenance (2)	9.5	2.5	2.0
Mary			
Baseline (4)	3.5	0.2	1.0
Posttest (3)	11.3	3.0	3.3
Maintenance (2)	11.2	2.7	2.7
Jessica			
Baseline (4)	3.0	0.2	1.5
Posttest (3)	11.3	3.0	3.3
Maintenance (2)	11.2	3.0	2.7
Clifford			
Baseline (5)	2.2	0.0	1.7
Posttest (3)	9.5	2.0	2.8
Sean			
Baseline (5)	2.1	0.2	1.3
Posttest (3)	11.3	3.0	1.7
Quincy			
Baseline (5)	4.1	0.2	1.4
Posttest (3)	9.6	2.0	2.3

Table 2

Mean Scores by Phase for Elements of Persuasive discourse and Primary Trait Scale

Student Phase (# Text)	Elements of Persuasive Discourse (Written Essay)	Primary Trait Scale (Written Essay)
Tony		
Baseline (2)	4.5	2
Posttest (2)	6.2	2
Annie		
Baseline (2)	9.5	4.2
Posttest (2)	11.5	4
Mary		
Baseline (2)	5	1.5
Posttest (2)	10.5	3.2
Jessica		
Baseline (2)	7.5	3
Posttest (2)	15.5	6
Clifford		
Baseline (2)	6	3.2
Posttest (2)	10	4.5
Sean		
Baseline (1)*	4.5	4
Posttest (2)	11	4
Quincy		
Baseline (2)	9.5	3.2
Posttest (2)	6.2	2.5

*Note: *Sean's baseline essay is missing.*