ReQuest in the Secondary History Classroom: How does the Introduction of a Purposeful Reading Technique Effect Comprehension of Text?

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ReQuest in the Secondary History Classroom: How does the Introduction of a Purposeful Reading Technique Effect Comprehension of Text?
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Abstract
This quantitative, action research study sought to explore the effects of introducing the ReQuest reading comprehension technique to students who are accustomed to using a world history textbook and the initiate-respond-evaluate questioning pattern to acquire basic historical information. Data collected from a series of paired sample quiz scores indicates that the ReQuest method shows promise as part of a purposeful, reciprocal teaching method when reading comprehension of expository text is the explicit goal of the classroom teacher. The results of this exploratory study support the literature on the use of explicitly taught reading strategies and suggests that further investigation of the ReQuest technique in the social studies classroom is warranted.

Introduction
Regardless of how social studies teachers approach the use of a textbook it is imperative that students are able to comprehend what is contained within the text. At the secondary level where some problems with reading comprehension are systematic, however, it is uncommon for students to still receive direct reading instruction. Reading skill instruction occurs between grades K-3 and typically ends by middle school (Howerton & Thomas, 2004). In turn, it is not surprising that reading scores in the US begin to drop after middle school when compared to other industrialized nations. Some reading comprehension problems stem from increasing student diversity as schools become increasingly inclusive (Fuchs & Fuchs, 1994), as well as linguistically and culturally diverse (Klingner, Vaughn & Schumm, 1998). These issues require teachers to reconsider literacy education in the content area classroom as secondary students continue to rely on reading comprehension to glean content knowledge from textbooks (Klingner, 1998).

The challenge of balancing a wide range of student needs in heterogeneous classrooms while facilitating the acquisition of reading skills and content knowledge requires the development of effective, empirically based interventions that seem viable to teachers (ibid.). With a plethora of reading strategies available for teachers to employ it is also important that the format and purpose for reading aligns with the strengths of the chosen strategy or technique. When students are trained in a specific strategy but not told why they are to use the strategy, they often perform better only temporarily (Adams, Carnine, & Gerston, 1982). Effective skill instruction, therefore, must be based on a purposefully selected, systematic strategy or technique that informs the learner of its purpose and teaches the student how to monitor use before, during and after reading (Adams, Carnine, & Gerston, 1982).

As a pre-service teacher intern working towards certification and a Master of Arts in Teaching, I recognized the need for my students to employ a purposeful reading
technique for lessons that involved use of the textbook. Working under the guidance of my classroom mentor and university faculty advisor, I developed a study that would explore the effectiveness of the Reciprocal Questioning (ReQuest) reading comprehension technique when used with the assigned textbook in my World History classroom. ReQuest, or reciprocal questioning, is a hybrid text comprehension technique that combines select aspects of reciprocal teaching, questioning, peer learning strategies, and instruction in the use of the technique to assist readers in comprehending more of what they read (Fisher & Frey, 2012). ReQuest is designed to address the lack of strategy instruction in secondary content classrooms in which teachers need effective strategies to help students who are partially dependent on text for content knowledge in secondary social studies. The results of this study helped me determine if the ReQuest reading technique would improve the general reading comprehension of my students with the content found in our textbook. With this in mind, this study addressed the research question: How does the introduction of the ReQuest reading technique affect reading comprehension of world history textbooks in a social studies classroom?

**Review of the Literature**

The ability to comprehend text is important in all disciplines, but is especially important in the social studies where there is often a heavy reliance upon the textbook (Levstik, 2008). Excellent social studies teachers know that historical knowledge is interpretive and constructed by the learner (Barton & Levstik, 2003). In that sense, the use of the social studies textbook is relatively limited since textbooks typically rely upon expository text to present content in a coherent and unbiased fashion (Alverman, Phelps & Ridgeway, 2007). Textbooks do, however, have some benefits. They can be helpful in structuring loosely coupled curricular goals and objectives (Alverman, Phelps & Ridgeway, 2007), and there are instances in the social studies classroom in which the presentation of coherent and unbiased factual information is necessary. In these instances, the lower-order cognitive process of comprehension is essential for laying a basic factual foundation for the higher-order learning that will hopefully follow. If students cannot understand what they are reading, they will not be able to use that information as background knowledge in a more critical fashion later on. With this in mind, teachers who utilize the social studies textbook need to consider its limitations while also maximizing its usefulness through purposeful attention to student comprehension.

Reading comprehension is typically defined as the understanding of written text that results from the interaction between the text and the reader’s prior knowledge (Rayner, Foorman, Perfetti, Pesetsky, and Seidenberg, 2001). Although there is much more for researchers to learn about enhancement of reading comprehension in the classroom, most agree that the goal of comprehension is more likely attained when students are actively involved in seeking, organizing, and reformulating information in their own words (Pressley, 2000), meaning that there is a large cognitive load the students must deal with as they decode print and incorporate textual information with their existing knowledge (Anderson, Wang & Gaffney, 2007). In order to manage this cognitive load, good readers are purposeful, strategic, and critical in their approach to various types of text (Anstrom, 2009). Likewise, good teachers must be purposeful and strategic when choosing the most appropriate reading strategy or technique for the type of text they ask students to read. Purposeful development of content-text reading skills and strategies can therefore benefit every student in the class, from the student who struggles with reading, to the unenthusiastic reader, to the strongest reader (Howerton & Thomas, 2004).

The development of interactive reading comprehension instruction was a part of the “cognitive revolution” of the 1970’s and 1980’s that resulted in multiple-strategy instructional approaches (Taylor, Pearson, Garcia, Dougherty Stahl & Bauer, 2007). One
such one approach to comprehension instruction is Reciprocal Teaching (Palincsar & Brown, 1986), which has been shown to increase comprehension of new material (King, 1990) and is recognized as an effective strategy for setting a purpose for reading, critical self-evaluation, and analyzing text (Virginia Department of Education, 2004). Reciprocal Teaching involves a gradual release of responsibility from teacher to student through a process that spans four comprehension strategies – predicting, questioning, seeking clarification and summarizing (Duke & Pearson, 2002).

The ReQuest questioning technique is an option teachers can use to address the questioning and clarification phases of the Reciprocal Teaching strategy. It is considered a “during reading” technique, which means it should be combined with other questioning techniques that support prediction and summarization for maximum effect. Effective readers know how to ask and answer questions of the text and with expository text that means constructing answers from explicit information found directly in the text, implicit information that students have to pull from various parts of the text, and implicit information that students connect to prior knowledge or experiences (National Institute for Literacy, 2007). ReQuest can help improve reading comprehension by providing students with an active learning opportunity to develop these questioning behaviors (Manzo, 1969). With ReQuest, the development and clarification of questions with peers requires students to interact with, not just read, the text.

Effective comprehension instruction includes teacher modeling of a strategy or technique in action as well as collaborative use by teachers and students followed by guided practice and independent use by the students (Duke & Pearson, 2002). ReQuest begins with facilitator guidance as the teacher models questioning behavior and helps students by providing direct feedback on the their questions. Questioning involves two separate but equal aspects, the formulation of the question, and the formulation of the answer. Research indicates that student generation of questions while reading, especially integrative questions that capture large units of meaning, improves reading comprehension and memory of text by making readers more active while reading (Pressley, Johnson, Symons, McGoldrick & Kurita, 1989). Students who utilize ReQuest have been shown to ask more critical thinking (vs. recall) questions, give more explanations (vs. low-level responses), and demonstrate higher achievement than using a discussion approach (King, 1990).

Additionally, the literature on question answering suggests that purposeful instruction about the relationships between questions and answers increases correct responses to questions following a reading selection (ibid.). The ReQuest technique incorporates instruction of the strategy itself, which encourages students to think about their mental processes and execute a specific strategy when reading text (McKeown, Beck & Blake, 2009). Purposeful skill instruction also aligns well with cooperative learning techniques (Zhang, 1993), and the ReQuest technique includes a peer-teaching component that can help address the challenges of diverse reading competences and interests (Fisher & Frey, 2012). Research indicates that peer questioning appears to promote peer interaction and learning by controlling the quality of the questioning, which in turn shapes peer responses (King, 1991). Finally, ReQuest is also an excellent form of informal, formative assessment because the teacher receives a great deal of diagnostic information about the specific learning difficulties or deficiencies of the students’ comprehension of text.

**Research Methods**

I framed this study as an action research project since I was examining a specific problem faced by practitioners and was engaging in one step of a cyclical process of instructional improvement (Johnson & Christensen, 2000). In addition to my role as primary investigator I was also a pre-service student intern enrolled in a one-year
intensive study Master of Arts in Teaching program at the state’s flagship university. As a part of the induction program I was required to complete a total of thirty-three weeks of student teaching divided into three rotations of eleven weeks, each taking place at a different school. I conducted the data collection phase of this study during the final rotation under the guidance of a classroom mentor teacher and my faculty advisor.

This study involved a pool of 20 students enrolled in World History classes at a public rural high school in a mid-southern state. The pool of students was relatively small because the school itself was also relatively small. For the 2009-2010 school year, the student population consisted of 354 students in grades 9-12, almost exactly 50% (178) of which was female. Approximately 78% of the students in the high school were identified as White, 9% were Hispanic, 4% were Asian or Pacific Islander, and 3% were Native American. The school was located approximately 30 miles from the university and was in an area of the state that was somewhat economically depressed with 62% of the students eligible for free or reduced lunch. I selected the students for the study by convenience sample, since I was also their classroom teacher. I arrived at the final sample of 14 students out of the pool of 20 students by removing participants who failed to submit the required quiz scores or parental informed consent form. I did not attempt to control for differences in gender, ethnicity, socio-economic status or achievement level as an enrollment management program selected the students for classes randomly.

I selected ReQuest for this study because it lends itself particularly well to three pre-existing classroom conditions. First, the students regularly used the same type of text in the form of a world history textbook with their regular classroom teacher. Request is ideally suited for this type of text because it is written in sections, which provide natural stopping points for question generation and clarification. Secondly, though these particular students are not formally tested on reading comprehension at the secondary level, the class contained a wide spectrum of reading levels. ReQuest is suited for diverse ability student groups. Finally, the students were accustomed to Read Aloud and Initiate-Respond-Evaluate (Fisher & Frey, 2012) instructional strategies, and had not previously utilized ReQuest.

Instructional Methods

Data collection occurred during the course of normal classroom instruction using Chapter 26 of World History (Ellis & Esler, 2007). As the teacher/researcher I combined the five components of comprehension instruction (Duke & Pearson, 2002) with the suggested dialogue of the ReQuest technique (Manzo, 1969) to lead the students through the process. Since the purpose of this study was to see how the ReQuest technique would improve student comprehension when substituted for the typical initiate-respond-evaluate model of questioning, I began the lesson with the use of prediction as I normally would in order to keep the first phase of the Reciprocal Teaching technique unchanged.

I began the questioning phase of the ReQuest lesson by providing an explicit description of the technique and when and how it should be used (component 1).

“Today we are going to be using a reading technique called ‘ReQuest’ as we read the textbook. ReQuest is designed to help improve your understanding of explanatory text like your textbook. It is a good method to use when you are trying to understand something that a book or other piece of text is trying to explain to you. ReQuest starts with you reading a section of your textbook individually and stopping at a designated point. After we read each section we will then take turns asking each other questions about what we read. Are there any questions before we begin?”

I then continued the lesson by modeling the technique in action (component 2).

“Let’s start by reading the first section of the text by ourselves. As you read I want you to think of questions you want to ask
me about what you are reading. You may ask me as many questions as you want. I will close my book and answer them.”

After reading the first section of text individually the students challenged me with questions, which I answered without the help of the text. As I was answering the students’ questions, I also modeled the clarification process by providing complete explanations and using references to specific passages in the text. I also monitored the level of questioning the students employed, as the goal is to scaffold them into higher order questioning in later phases of the process.

The second phase of ReQuest is a continuation of teacher modeling through a reversal of roles.

“Now we are going to read the next section of the text just like we did with the first section. However, this time when we reach the end of the section, you will have to close your books and I will be asking the questions for you to answer.”

The students read the section and answered the questions I posed with their books closed. Halfway through the questioning, I paused and said,

“I want you to pay close attention to the types of questions I am asking about the section of text. Notice that I’m not just asking questions than can be answered just by looking back at what was written. I am also asking questions that require you to think about what we have learned in the past as well as questions that require you to form an opinion or judge what you have read. When it is your turn to ask questions next time, see if you can come up with questions like these too.”

As the students answered my questions I encouraged them to use complete explanations and specific references to the text. As with the first phase, I monitored the quality and completeness of the students’ answers.

For the third and fourth phase of the ReQuest technique I focused on collaborative use of the technique in action (component 3) by encouraging the students to generate higher order questions and answers.

“Let’s read the next section of the text and you will ask me questions again. See if you can ask me questions that can be found directly in the text, questions that might connect to things we learned in the past, and questions that really make me think!”

Once again I monitored the level of the students’ questioning and modeled question answering by providing complete answers with specific references to the text and examples from previously learned content. For the final teacher-led phase the students read a fourth segment of the text and answered higher order questions from the teacher.

“Let’s try this one more time together. We will read the next section and then you will answer my questions. I’m going to use the types of higher-order questions I want you to ask each other in the next phase. I’m also going to make sure you are giving complete answers and that you are able to provide specific examples from the book.”

At this point, ReQuest becomes a peer-to-peer activity rather than a teacher-to-student activity. I used guided practice (component 4) with some students who were still struggling with question and answer generation while other students were capable of independent use of the technique (component 5). The students were paired up and repeated the phases of the ReQuest technique with one another. We decided on stopping points in the textbook and the students took turns reading, generating questions, and formulating complete answers using specific references from the text. I provided the students with index cards to record their questions and answers in order to hold them accountable and to their monitor questioning. Written questions are accepted protocol for ReQuest. While the students worked, I moved around the room monitoring their process and providing assistance when needed. As I checked in on the groups of students I reminded them that they were training
themselves to read with the purpose of being able to ask and answer questions at a higher level.

The lesson ended with the summarization phase of the Reciprocal Teaching strategy as it normally would in an attempt to isolate the ReQuest technique as the only instructional change from previous lessons. Each of the ReQuest treatment lessons was conducted as described in this section in order to maintain consistency between treatments.

**Data Collection**

I collected data on the students’ general comprehension of content by using a series of chapter quizzes provided by the textbook publisher. A team of researchers and teachers created the quizzes in conjunction with the publisher and it is feasible to assume they were created with validity and reliability in mind. The quizzes consisted of ten multiple-choice questions randomly drawn from a bank of 25 questions. I chose these specific instruments because the students were accustomed to using them with their regular classroom teacher and because they provided a consistent number of questions that assessed student knowledge of text at the comprehension level of Bloom’s taxonomy. The students took each of the quizzes online during class.

Measuring comprehension using only this method obviously presents some limitations. Most literacy experts agree that comprehension is developmental and dependent upon a student’s knowledge and experiences. Any one-dimensional attempt to measure students’ reading comprehension is going to be fundamentally lacking. (Francis, Snow, August, Carlson, Miller & Iglesias, 2006). Advanced comprehension measurement instruments would allow researchers to test developmental differences as well as the relationship between decoding ability and fluency (Dougherty Stahl, Garcia, Bauer, Pearson & Taylor, 2006). For cognitive strategy instruction such as the ReQuest technique, comprehension assessments would ideally tap into how students use cognitive strategies to make meaning of text (Dougherty Stahl, Garcia, Bauer, Pearson & Taylor, 2006). That said, for the purposes of this study and for the textbook activity, I was primarily interested in improving the students’ general comprehension of content. The questions developed for the quizzes represented both literal and inferential understanding of the textbook and were similar in format to other measures of general comprehension such as the Nelson-Denny (Brown, Fisco, & Hanna, 1993) or Gates-MacGinitie reading tests (MacGinitie, MacGinitie, Maria & Dreyer, 2000). I began the data collection process with a benchmark quiz that was used as a baseline measurement of student comprehension for comparison to later quizzes following use of the ReQuest technique. The students read a text selection using the accustomed IRE technique and took the corresponding benchmark quiz. The data collection process continued with the ReQuest instructional technique discussed above. The students completed a series of three chapter sections using the ReQuest technique and took the corresponding quiz for each section. I recorded these scores as ReQuest treatments #1-3. Data from the benchmark and the three ReQuest treatments constituted the scope of the data for the study.

**Data Analysis**

I analyzed the quiz score data quantitatively by examining differences in mean scores and standard deviation using a paired sample, two-tailed t-test (p > .05) to determine if the differences between the benchmark scores and each of the treatment scores were statistically significant. The null hypothesis was that there would be no statistically significant difference between the benchmark and treatment scores. I also examined the differences in standard deviation to see if the distribution of the students’ scores changed with treatment.

**Results**

The data indicates that the students’ mean quiz scores improved following the use of the ReQuest technique with a corresponding drop in standard deviation (Table 1). Analysis of
the data indicates a difference between the benchmark (M=8.71, SD=1.44) and ReQuest treatment 1 (M=9.43, SD=1.01); t(13) = +/-2.16, p= 0.05 that approached statistical significance and a statistically significant difference between the benchmark and ReQuest treatment 2 (M=9.86, SD=0.36); t(13)=+/-2.16, p = 0.05.

The data, however, also indicates a slight decline between ReQuest treatments 3 and 4, though the mean score difference between the benchmark and ReQuest treatment 4 were still statistically significant (M=9.64, SD=0.74); t(13)=+/-2.16, p = 0.05. In addition to the significant improvements in reading comprehension scores, the difference in standard deviations for each quiz also narrowed considerably indicating that the ReQuest method may have helped to close the gap in student comprehension. Again, the standard deviation widens a bit with the fourth ReQuest treatment, raising questions about the limitations of ReQuest as a stand-alone questioning and clarification technique.

**Discussion of the Results**

I rejected the null hypothesis that the ReQuest reading technique would not affect comprehension outcomes based on the statistically significant differences identified by the paired t-tests. For this subject group, the ReQuest reading technique increased general social studies text comprehension and narrowed the achievement gap, which suggests that lower level readers may benefit from using the ReQuest technique. The scores show an almost universal, progressive increase in reading comprehension following implementation of the ReQuest reading technique, yet a slight dip after the third treatment that may be due to novelty effect.

All of the students’ scores showed increased comprehension with one exception. Ten of the students’ scores remained perfect between quizzes 3 and 4. One student improved dramatically from a score of 60% to a score of 100% by the final quiz. Three other students, however, saw their scores fall between the third and fourth quiz. It may be possible that a single chapter of text, covered over the course of two weeks, is the length of time that is optimum for these students. By the final chapter section and the final two days of the study, the students were becoming weary of writing their questions on index cards. From monitoring the students’ index cards I found that the students’ initial level of questioning was generally higher than I expected, which may have left less room for improvement than I originally anticipated.

As with all research, this study is bound by limitations, especially in terms of scope and generalization. The data represents a small convenience sample, and replication of the sample group may not be possible in other contexts. It is impossible, therefore, to
generalize the findings of this research to a larger population. Even though I was able to determine statistically significant difference between mean scores, the sample population was relatively small indicating that further investigation with larger, randomly sampled groups is in order. Smaller sample sizes, however, also require larger differences in mean scores in order to be statistically significant, which is a promising sign for the ReQuest method.

**Conclusion**

Teachers must choose instructional techniques, strategies and methods based upon the objectives they want to meet and goals they hope to achieve with their students. Comprehension is a lower-order skill and should not be a social studies teacher’s end goal. However, comprehension of expository text is an essential means to many of the higher-order ends the social studies teacher or student is hoping to achieve. With that in mind, this exploratory study indicates that the ReQuest technique, when utilized as a part of a more comprehensive literacy strategy, demonstrates potential for improving general reading comprehension of expository text commonly found in social studies textbooks. Prior research suggested that ReQuest would be an effective reading comprehension technique for use with secondary social studies textbooks and the results of this study supports this. If similar results are duplicated over time using more generalizable and critical methods then regular use of ReQuest for this subject group may be indicated for increasing reading comprehension.

Future research in this area should certainly examine the effects of the ReQuest technique on larger groups of students in a variety of settings over a longer period of time. The slight dip in scores for the fourth quiz may indicate that a longitudinal study is needed to examine the possibility of the novelty effect in more detail. Research on ReQuest could also benefit from an approach to data collection that utilizes additional sources of data in order to measure reading comprehension in greater detail. For example, researchers might consider collecting the question/answer notecards written by the students during the ReQuest lessons and analyze them for level of questioning and evidence of comprehension in response. A mixed methods approach that combines quizzes, notecard analysis and interview or survey data could also help researchers tap into the metacognitive approach students take towards overcoming the barriers to understanding expository text. Finally, it would also be very beneficial to explore how the ReQuest technique compares with other questioning-clarifying techniques as a part of Reciprocal Teaching or other comprehensive comprehension strategy as well as how increased reading comprehension using ReQuest might influence other higher order historical thinking skills such as the use of primary sources or making historical inferences (Seixas, 2006).

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