

THE EFFECTS OF MIDDLE SCHOOL SOCIAL STUDIES TEACHERS' QUESTIONING  
PATTERNS ON LEARNERS' OUTCOMES

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## **DEDICATION**

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THE EFFECT OF TEACHERS' QUESTIONING PATTERNS ON LEARNERS'  
OUTCOMES

Carianne Capalongo-Bernadowski, PhD

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The purpose of this study was to determine the effects of middle school social studies teachers' questioning patterns on learners' outcomes. Using a strategy developed by Beck, McKeown, Sandora, Kucan, & Worthy (1996), *Questioning the Author*, participants were trained in the implementation of this effective questioning strategy in an effort to improve classroom questioning and students' responses to text.

Two volunteer social studies teachers from an inner city middle school in western Pennsylvania were the participants in the study. The investigator served as the primary observer using a case study format.

The primary instrument used to gather data was observations. The investigator observed and audio taped each lesson. Once the lessons were audio taped, the observations were transcribed and categorized using an observation tool based on the work of Beck, McKeown, Sandora, Kucan, & Worthy (1996).

Four social studies texts were used and each was taught by the participants during a separate 45-minute class period. Together the investigator and the participants pre selected these texts based on curriculum criteria. Once the chosen texts were taught to the students, the investigator trained the subjects in the implementation of *Questioning the Author* (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997; Beck,

McKeown, Sandora, Kucan, & Worthy, 1996) strategies. The investigator then observed the subjects teaching the same four texts.

The data obtained from the audio tapes and observations were analyzed using tables and descriptive narratives. In addition, participants kept reflective teaching journals, which were also categorized and analyzed.

Additional instruments used to gather data included the Survey: Teaching Questioning Survey and interviews with participants. The survey was distributed prior to the study and sought after information about the participants' general knowledge of questioning strategies. Interviews were conducted before and during the study with information obtained woven into the analysis and conclusions.

The study concluded that the intervention staff development strategy, Questioning the Author (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) resulted in an increased ability of teachers to ask questions that prompted higher student engagement with text. Similarly, the increase in text engagement resulted in elevated levels of comprehension.

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# CHAPTER I

## INTRODUCTION

### A. Context of the Problem

Comprehending text in social studies is a complex process. Students must apply background knowledge, read strategically, synthesize information and apply this new information to the next section of text. Put another way, students must use the known to comprehend the unknown and then apply the newly known to comprehend more unknown. In this way, students navigate their way through the text, images, tables and icons of today's social studies texts, some doing so more effectively than others.

Helping students effectively comprehend text in social studies is an even more complex process. Teachers must activate, prod, coax, suggest, extend, redirect, and appraise what students know and do as they navigate social studies text--*if* they know that such instructional moves are important to helping students comprehend text. And if they do, then how do teachers know which moves are most effective? And how does a teacher learn to use those moves at just the right time and way?

Answers to these questions are among the most complex of all. Knowing *what*, *how*, and *when* to make the most effective instructional move--with a diverse classroom of students--is the *sine qua non* of masterful teaching. It requires deep knowledge of the reading process, the teaching act, disciplinary knowledge, human motivation, and social development. And it requires an instinct to follow a lead, note patterns, ask questions, and act experimentally in increments that move toward a goal larger than the moment.

This study is about the emergence of such knowledge, skill, and instinct. It is about two social studies teachers who learn to help students comprehend text in social studies more effectively. The tool they use for helping students comprehend better is the *question*. They learn how to use questions as instruments for better comprehending and learning.

Theoretically, this study is rooted in the scholarly tradition of constructivism. The central assertion of this tradition is that people use what they know to ‘construct’ something new. They draw upon the material of their past experiences to fashion newly patterned material (Tompkins, 2002, p. 4). They do this actively (von Glasserfield, 1987). They do this adaptively (von Glasserfield, 1987). They do it purposively (i.e., for particular reasons or goals) (Ernest, 1994). And they can do this better if they have someone more experienced to mark the path and coach them along--often through the use of questions (Ernest, 1994).

Constructivism explains how students make sense of social studies text. Using experiential and domain knowledge about history, geography, sociology, and economics, the text suggests how students can arrange and organize their existing knowledge into a new arrangement and organization. In turn, this new knowledge and experience becomes the material that a text could suggest a student use for constructing newer knowledge, *ad infinitum*.

Constructivism also explains how teachers’ actions influence how students interpret, use, apply and evaluate information. For this study, the actions of interest are how and when teachers question students. How can questions help students use what they know to ‘construct’ something new? And how can questions help students draw upon the material of their experiences actively, adaptively, and purposively...to fashion newly patterned material?

These questions, long connected to the constructivist tradition, have an even longer connection to social studies. Dewey and others of this time reasoned that “students must have

information to act on--evidence developed through their own experiences that can be related to the ideas and skills being taught” (Sunal & Haas, 2002, p. 5). And the social studies standards of a decade ago are also rooted in the premise that students must integrate information from a variety of sources (e.g., self, others, texts, film, images, maps and graphs) to construct and represent varying perspectives (National Council for the Social Studies, 1994). It is within this context, that the study outlined in the following pages is set. The goal of the study is framed by two related questions: (1) What effects do middle school social studies teachers’ questions have on students’ comprehension of social studies text? (2) What effect does a staff development intervention program have on the teachers’ questioning behaviors and knowledge?

### **B. Statement of the Problem**

The dual purpose of this study-- how questions affect student comprehension and how staff development affects teachers’ questioning--is motivated by a single problem: teacher questioning is rarely used to *improve* student comprehension of social studies text. Rather, teacher questioning is most often used to assess student comprehension of social studies text. This misalignment was described by Rogers (1972) as, “a discrepancy... either in the goals or practices concerning the value and use of questions to foster thinking” (p. 58). The aim of this study is to chronicle the effects of an intervention to more closely align the questioning goals and practices of two classroom teachers.

### **C. Elements of the Problem**

The goal of the study is to understand two social studies teachers' questioning strategies as they learn a different way to help students better comprehend social studies text. The study will do the following:

1. Determine and compare the teachers' knowledge about questioning strategies in a middle school social studies classroom.
2. Determine and compare the teachers' current practice of questioning in a middle school social studies classroom.
3. Determine the effects of an intervention staff development program on the questioning behaviors of social studies teachers in a middle school classroom.
4. Determine the levels of students' engagement and interaction with text, the teacher and peers after the intervention was implemented.

### **D. Significance of the Study**

There are three ways in which this study is significant to social studies pedagogy. First, this study has the potential to contribute to the accountability of teachers and school districts to meet state and national standards. One way to improve student achievement and meet standards is through the implementation of appropriate questioning strategies. By coaching teachers to use questions effectively in the classroom, students will begin to interact and engage with text at new levels. This engagement will result in better student comprehension of text.

Second, there is a need for staff/professional development for teachers to improve their questioning behaviors, which can contribute greatly to how we conduct in-service programs in school districts across Pennsylvania. Investigators have consistently found that adults, like children, need to become actively involved in their own learning process. Hampel (1999) states,

“Sustained faculty conversation about important educational issues is as rare as it is crucial in most American schools. Doing takes precedence over talking, and isolation is more common than collegiality.” This study aims to not only give students strategies to deal with complicated text, but also give teachers the tools to support those students during this process. These tools will arm teachers with effective instructional strategies.

Finally, this study has the potential to improve collaboration among teachers to improve their questioning skills in their classrooms while making instructional decisions that benefit all students. An increased appreciation for practical knowledge enriched by critical reflection has produced a large body of literature that supports teachers’ need to become actively involved in their own learning process, constructivism allows for this process to occur naturally. “Teachers learn best by studying, doing and reflecting; by collaborating with other teachers; by looking closely at students’ and their work; and by sharing what they see” (Darling-Hammond, 1997). This study will shift the mindset of teachers from working independently in their individual classrooms to collaborating with colleagues.

#### **E. Outcome of the Study**

The outcomes of the study have the potential to heighten teacher awareness of the direct relationship between teacher questioning behaviors and students’ knowledge and performance with text. This study enables teachers to adapt, adjust, monitor and evaluate instruction in relation to questioning in the classroom. This study also has the potential to increase teachers’ awareness that they must support their students’ abilities to use higher-order cognitive thinking that has the potential to transfer to reading comprehension. A final outcome of this study will strive to clarify a distinct need for explicit teacher training in the use of classroom questioning techniques.

## **G. Definition of terms**

**Cognitive Level of Questions:** Determined by the label placed on each question as they are categorized in Bloom's Taxonomy (1956). The classification system is as follows:

Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation.

**Lower-level Cognitive Questions:** According to Bloom's Taxonomy (1956) this includes: Knowledge, Comprehension and Application. According to Gall (1970) lower-level cognitive questions require the student to recall previously presented material.

**Higher-level Cognitive Questions:** According to Bloom's Taxonomy (1956) this includes: Analysis, Synthesis and Evaluation. According to Gall (1970) a higher-level cognitive question requires students to engage in independent thinking such as problem solving, analyzing and/or evaluating information.

**Intervention Staff Development:** This signifies the program used by the investigator in the study and created by Beck, McKeown, Sandora, Kucan, & Worthy (1996) as a means to improve the questioning abilities of the participants in this study. When training teachers, the investigator used the strategy Questioning the Author, (QtA).

**Student Achievement:** Student achievement is measured by better comprehension of social studies text/material in the classroom through various levels of engagement. A significant increase in more and better questions would indicate that students are achieving.

**Affective Domain:** Affective domain is concerned with the area of study that deals with students' attitudes.

**Taxonomy:** Taxonomy is a classification system used in a systematic way to classify questions.

**Constructivism:** A theory that dictates that learners construct new ideas or concepts based upon their current and past knowledge (Bruner, 1966).

**Metacognition:** The ability to reflect on one's own thinking process or "thinking about thinking" (Flavell, 1979).

**Text Talk:** A strategy developed by McKeown and Beck (2003), which aims to increase students' opportunities to respond to decontextualized language in meaningful ways.

**Closed Question:** A question that does not encourage extensive response on the part of the student; answered in just one or two words typically found in text.

**Open Question:** A question that encourages students to express and connect ideas in the text. This type of question encourages elaboration of ideas.

**Questioning the Author (QtA):** This is a reading strategy/instructional intervention developed by Beck, McKeown, Sandora, Kucan, & Worthy (1996), which focuses on having students grapple with and reflect on what a particular author is trying to convey or communicate in text in order to aid comprehension. This is accomplished through the use of *Queries* (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997).

## **CHAPTER II**

### **REVIEW OF LITERATURE**

This chapter focuses on the literature related to teacher questioning. Section one summarizes the past and current research related to teacher questioning and the effects these questions have on learner outcomes. Section two summarizes the taxonomies, classification schemes and research based strategies used in research studies on teacher questioning, questioning patterns observed in social studies classrooms and teacher/staff development practices.

#### **SECTION ONE**

##### **Teacher Questioning Research: Past and Present**

The use of classroom questioning by teachers has a long and venerable history, dating back to the Greek philosopher, Socrates, when he used a method of questioning to challenge assumptions, expose contradictions, and lead to new knowledge and understanding. Since the early 1900s questioning techniques of teachers have been of major concern of investigators. The first 50 years of research focused on describing and evaluating teachers' use of questions in the classroom. During the next 20 years, sophisticated methods of systematic observation and analysis were developed to identify teacher-questioning behaviors (Ellis, 1993). Beginning in 1970, investigators began to turn their attention toward identifying questioning behaviors and their correlation to student achievement. The use of classroom questions continues to be a vital part of classroom instruction second only to lecturing in popularity. So popular is questioning in



the typical classroom that teachers spend anywhere from 35 to 50 percent of their instructional time conducting questioning sessions in some form or another (Cotton, 2003).

Questions have been labeled as “the single most influential teaching act” (Taba, Levine & Elzey, 1964). So important and influential are questions that Hunkins (1976) states, “the question is of paramount importance...without the question there is no processing of information” (p. 2). Reviews of research findings on questioning contend that it is an effective way “to stimulate student interaction, thinking and learning” (Wilén, Ishler, Hutchinson, & Kindsvatter, 2000). In classroom settings, teacher questions can be defined as stimuli that convey to students the content to be learned, as well as, the directions for what they are to do and how they are to do it. Questions continue to be an essential component of classroom discourse across grade/ability levels and content areas. Questions take different forms and place different demands on students. Some questions require only factual recall and do not provoke analysis, while others challenge students to analyze, synthesize and evaluate information. When assessing students’ understanding of what is read, teachers have historically engaged in question asking (Dunkin, 1978; Raphael & Wonnacott, 1985). Whether written or oral, questions serve as powerful cues as to what teachers’ value in the text or lecture. By analyzing teachers’ questions, we have the ability to understand what the teacher values or their instructional objectives.

Analysis of teachers’ questioning behaviors is by no means a new area of interest. As early as the 1900’s, teachers’ questions were in the forefront of educational research. In her 1912 study, Stevens found that teachers talk 64 percent of the time with questions requiring simple rote memory. Stevens (1912) also concluded that approximately 80 percent of a teacher’s instructional time was devoted to asking questions of students in some form or another. Over sixty years later Leven and Long (1981) found that teachers were asking anywhere between 300-

400 questions per day, and Graessar and Person (1994) found that teachers' questions vary from 30 to 120 questions per hour (p. 710). A study by Roth (1996) found the questioning rate of teachers is highest during lectures, an average of 82 questions per hour, and lowest during routine seatwork, averaging three questions per hour. These findings support that questioning sessions vary tremendously between teachers, settings, and situations. Roth (1996) also found the rate at which teachers asked questions were negatively correlated with the teacher's knowledge of the content.

To emphasize the importance of teachers' questioning behaviors Flanders (1970) states, "Teaching behavior is the most potent, single, controllable factor that can alter learning opportunities in the classroom." In addition, Flanders cited that the chances are better than 60% that you will hear someone talking if you are in an elementary or secondary classroom. Aschner (1961) calls the teacher a "professional question maker" and states that asking questions is one of the basic ways by which the teacher stimulates student thinking and learning. Teacher questioning is not only a large part of classroom discourse, but also an essential component where questions by teachers dominate much of that time. Questions can be used for a variety of purposes in a constructivist driven classroom. "A question can and does serve a plurality of purposes simultaneously. The primary purpose of a question is to spur a person to think and to direct that person to think about a topic" (Hyman, 1979, p.161). Questions can help teachers achieve a variety of instructional goals including the social and individual needs of students, meeting the content related goals of the curriculum, as well as many others. Hyman (1979) states that "no other single pedagogical technique yields so many returns" (p.193) as do questions.

Classroom discourse has been at the center of much debate. Some believe that teachers set an agenda prior to classroom discussions using questions as a means to dominate, and many

times slant, the discussion. Cazden (1986) refers to classroom talk as “the medium by which much teaching takes place and during which students demonstrate to teachers much of what they have learned” (p. 432). Questions play many different roles and serve a variety of purposes in the classroom community and teachers have the daunting task of knowing what questions to ask, when to ask those questions, where to ask those questions, why to ask those questions and how to ask those questions. Questions serve to develop students’ interest in a topic and to motivate students to become involved in lessons supporting their construction of meaning. Teachers often use questions as a means to evaluate students’ preparation or lack thereof. Additionally, questions are used to review and summarize previous lessons and assess achievement of instructional goals or objectives. Most importantly, teachers use questions to develop critical thinking skills and nurture insights by exposing new or related relationships. The purposes are generally pursued in the context of classroom recitation, defined as a series of teacher questions, each eliciting a student response and, on occasion, a teacher reaction to that response (Dillon, 1982a). Overall, teaching is essentially an interactive, social and verbal activity and teachers need the tools necessary to use questions as they are meant to be used...effectively. The relationship between student and teacher is symbiotic where one affects the other (Wimer, Ridenour, Place & Place, 2001, p. 85). As a result both students and teachers play an important role in the questioning process.

Teacher questions, at times, have the opposite effect of their intended purpose. Although the act of asking questions has the potential to improve instruction and greatly facilitate the learning process, it also has the potential to turn a child off from learning. Questions can embarrass, at times, rather than promote inquiry. Questions can potentially leave a student feeling exposed, stupid, and more willing to skip class than to be humiliated again (Bly, 1986).

To discourage students from questioning the teacher, many times teachers employ a variety of strategies, many not effective. Teachers will dominate the floor, frequently request low-level factual information, and disregard the student bids to change the current topic (Carlsen, 1988). On the other hand, student participation increases in lessons where teachers do not evaluate the students' responses, when teachers relinquish control, and when teachers ask personal questions and show genuine interest (Roth, 1996, p. 711). The goal is to allow students to actively and purposely engage with the content being taught. Teachers can accomplish this goal through effective and appropriate questioning strategies.

### **Question Types and the Effects on Learner Outcomes**

With teachers asking between 300-400 questions each day (Leven & Long, 1981), and teacher questions constituting one-sixth to one-tenth of all classroom interaction time (Dunkin & Biddle, 1974), it is imperative to study the types of questions that are being asked in the typical classroom, as well as the effects these questions have on student achievement. Some believe that asking students higher-level cognitive questions or open questions is one way to improve learning outcomes.

The research findings are inconclusive on whether achievement gains are evident when teachers ask higher-level cognitive questions. Buggey (1971) found statistically significantly greater achievement by students whose teachers asked 70% higher-level questions and 30% knowledge questions. However, Savage (1972) replicated this study and found no differences in achievement. Likewise, Kniep (1974) also studied the achievement gains in social studies classrooms and found that when teachers used high-level questions at least 70% of the time, it fostered students' ability to recall content and their ability to respond to those questions.

Additionally, Ryan (1973) and Durkin (1972) found that higher-order questions positively influenced the achievement of the fifth and sixth grade students in social studies classrooms. On the other hand, Armento (1977) found that students' achievement was not correlated with high and low cognitive questions in her study of third through fifth grade preservice and in-service social studies teachers.

Implementation of higher-level cognitive questions is one way that teachers have consistently strived to improve student achievement. Wood and Anderson (2001) used case study teaching to demonstrate that this instructional approach can foster the critical thinking skills of teachers and students when lower and higher order questions are used, as well as techniques such as probing and reflective questioning skills. The case study method is often favored over direct teaching methods (i.e.; lecture) because it can involve the higher cognitive skills of application, analysis, synthesis, evaluation, metacognition, and reflection. "The case study method is essentially an universal problem solving method in the sense that all human cognition is purposeful, and aims at achieving goals or removing obstacles to those goals" (Anderson & Freeman, 1990).

It is no surprise that instruction that involves question posing is more effective in producing achievement gains than instruction implemented without questioning students. As a whole, research findings conducted at all grade levels have indicated that both written and oral questions result in learning gains (Brophy & Good, 1986; Wilen & Clegg, 1986). Specifically, research conducted by Gall (1970) focused on the types of questions teachers ask in their classrooms and the effects these questions had on learner outcomes. Gall distinguished between low-level cognitive questions and high-level cognitive questions. Lower-level cognitive questions are those questions that require the student to recall previously presented

material/information while higher-level cognitive questions require the student to engage in independent thinking which required students to use their knowledge to problem-solve, analyze and evaluate. The assumption is that students must have a deep understanding of content in order to answer a high-level cognitive question. Moreover, Gall (1970) found that approximately 60% of teachers' questions require students to recall facts; 20% require students to think; and the remaining 20% are procedural in nature (p. 24). An updated review of research conducted by Gall (1984) yielded the same conclusion.

More recently, research has turned toward examining the relationship between questions asked by teachers and the text read by students. Beck, McKeown, Sandora, Kucan and Worthy (1996) found an increase in quality of teacher's questions and quantity of students' responses after the implementation of their strategy entitled Questioning the Author (QtA). Once teachers were sufficiently and successfully trained in the implementation of QtA strategies, "Teacher talk decreased in quantity and increased in quality with more emphasis on questions focused on constructing and extending meaning and more skill in refining and using students' comments in discussion" (p. 385).

Much of the research points to questions as the main instructional tool by which teachers can foster student achievement. Gall and Rhody (1987) summarized research explaining the reasons that lead to learning gains (Gall, 1984; Palincsar & Brown, 1984; Pirozzolo & Wittrock, 1981). They concluded:

1. Questions are motivating, thus keeping students on task.
2. Questions focus the student's attention on what is to be learned.
3. Questions can elicit depth of processing.
4. Questions activate metacognition processes.

5. Questions elicit further practice of the content of the curriculum.
6. If the student answers a question correctly, that is reinforcing and the teacher may further reinforce the answer by praising or acknowledging it. If the student answers incorrectly, that can prompt the teacher to reteach the material.
7. Students' mastery of the curriculum is usually assessed by test questions. Therefore, questions asked during instruction are consistent with the tests

(Gall & Rhody, 1987, p. 25-26).

A teacher's questioning techniques that correlate with enhanced student achievement, include a balance of convergent and divergent questions, listening to student responses, redirecting those responses to other students, providing respectful feedback, and allowing for appropriate wait time after asking a question (Wood & Anderson, 2001, p. 2).

As much of the research indicates, good questions provoke thought, based on students' background and world knowledge as well as their experiences, and call for creative thinking. Students construct meaning for themselves through this process. However, most teachers request only explicit, factual information; in this context, they appear to be poor role models for good questioning that would provoke learning (Graesser & Person, 1994).

Carlsen (1991) proposed a framework in an attempt to organize the topic of teacher questions that is composed of three central features, (1) the context of questions (2) the content of questions, (3) responses and reactions to questions. The context of the questions has two major dimensions. One dimension is the ability to understand the teacher questioning and the conversational situation that is modified and changed by the speakers. From this perspective, understanding a question requires one to account for the teachers' constructions of historical,

physical and social aspects of the setting, and past, present and future verbal and nonverbal actions (Ochs, 1979).

Andre (1979) also studied the effects of asking students questions at different levels of cognitive complexity during learning. Using Bloom's Taxonomy (1956) Andre categorized questions asked during instruction. "The greater the depth-of-processing the higher the probability the material will be retained" (p. 281). His claim that higher-level questions produce higher-level answers is supported by others (Anderson, 1970; Craik & Lockhart, 1972). In regards to cognitive correspondence in particular, one prevailing notion has been that a "higher-order question elicits a higher-order response" (Lamb, 1976, p. 22). Andre calls this deep level of information processing the "level of question effect" and affirms that questions have a potential to be an instructional tool that can be manipulated by a teacher in order to produce certain learning outcomes. Among Andre's conclusions one finds that the effectiveness of higher-order over factual questions can lead to greater learner outcomes in reading comprehension.

Some argued (Centra & Potter, 1980; Lewis, 1978) that higher-order questions do not necessarily produce higher-order responses from students or in-depth thinking. Bellack, Kliebard, Hyman & Smith (1966) examined classroom discourse as a special type of "language game" where teachers' questions and students' responses are incongruent and may not match up like one would assume. Research on the relationship between teachers' questions and students' responses is mixed. Quite a number of research studies have found that higher cognitive questions are superior to lower-level cognitive questions, many have found the opposite and still others have found no significant difference.



## SECTION TWO

### **Taxonomies/Classification of Questions/Types of Questions**

This section summarizes the various taxonomies of educational/instructional objectives and classification systems used by various investigators/educators to classify types of questions. It seems the cognitive classification systems would be a useful means by which to develop teacher questioning strategies that maintain teacher questioning at higher cognitive levels. The role of the educator is not to transmit knowledge, but to challenge students to analyze, diagnose and plan effective strategies (Knowles, 1970). Furthermore, the educator must challenge the student to ask *themselves* higher order or open questions as they deal with information and text.

Using Bloom's Taxonomy (Bloom, Englehart, Furst, Will & Krathwohl, 1956) is perhaps the best-known and most widely used paradigm in education to assess the types of questions teachers ask students concentrating on the cognitive domain of learning. Bloom, Englehart, Furst, Hill and Krathwohl's (1956) taxonomy is a typology that assumes that the cognitive level of the question is determined by the response requested by the teacher. Their main interest was to find a way to establish a classification system of cognitive objectives by categorizing questions as knowledge, comprehension, application, analysis, synthesis and evaluation. The first three levels are generally considered to involve lower-cognitive learning, whereas the last three involve higher-cognitive learning. Hence, to effectively interpret, analyze, synthesize, and evaluate, a strong understanding of the lower cognitive levels, such as memorization and comprehension is essential. "When case analysis and discussion are limited to the first two or three categories, useful higher order insights are lost. Likewise, attempting to bypass the lower cognitive levels and start at the higher levels may be detrimental to learning" (Wood &

Anderson, 2001). Bloom et al. (1956) defined each category in his taxonomy, and then in a later book on affective domain (Hyman, 1979, p. 8) stated that he did not know whether his cognitive taxonomy is actually a hierarchical order of cognitive objectives or only a simple categorizing of cognitive processes with no rank ordering at all. Bloom (1956) described the classification system as it relates to student learning as “What we are classifying is the intended behavior of students-the ways in which individuals are to act, think, or feel as the result of participating in some unit of instruction” (p. 78).

In Bloom’s Taxonomy (1956) higher order cognitive functioning has been presumed to be more likely when students are engaged in synthesizing or evaluating information than when they are engaged in simple recall of information. Educators have assumed that those who ask higher order questions that promote analysis, synthesis and evaluation rather than lower order questions that rely on recall of information, foster critical thinking skills (Wimer, Ridenour, Place, & Place, 2001, p. 85). Bloom et al. (1956) described knowledge questions, the lowest level of the cognitive domain, as: “The major behavior tested in knowledge is whether or not the student can remember and either cite or recognize accurate statements in response to particular questions. Although somewhat more than rote memory is required for knowledge, the form of the question and the level of precision and exactness required should not be too different from the way in which the knowledge was originally learned” (p. 78). Thus, with a low level question the response requires straight memory or recall rather than more complex cognitive operations.

Higher-level cognitive functions are described by Bloom (1956) as: “It is probable that tasks involving synthesis objectives provide a wider kind of experience than those involving mainly acquisition of ideas” (p. 167). One could assume that higher level questioning leads to higher level thinking. Many studies have suggested that higher order questions tend to elicit

higher level cognitive responses (Lamb, 1976; Martin, 1979), and Wilen and Clegg's (1986) findings revealed that effective teachers ask high-level cognitive questions. Other studies have also reported that thinking is elevated beyond mere memorization when teachers ask questions higher than the level of simple recall (Perry, Vanderstoep & Yu, 1993; Redfield & Rouseeeau, 1981; Samson, Strykowski, Weinstein & Walberg, 1987; Winne, 1979).

Others reinforce use of higher-level cognitive questions in the field of educational research. Studies have shown that when teachers use and facilitate higher level cognitive questions there are significant gains. A meta-analysis of 18 experiments (the same 18 used by Winne plus two additional studies) by Redfield and Rousseau (1981) concluded that the predominant use of higher-order questions during instruction yielded positive gains on tests of factual recall and application of thinking skills. "This analysis demonstrates, regardless of type of study or degree of experimental validity, teachers' predominant use of higher cognitive questions has a positive effect on student achievement. These overall findings lend support to previous conclusions regarding the importance of teacher questioning behavior on student achievement" (p. 244).

The correlation between the types of questions asked by teachers and the students' responses to questions is also documented in Beck and McKeown's Text Talk (2003). Beck and McKeown (2003) found that talk dealing with text, in particular, is the key to helping students grow as readers. Talking about decontextualized language and building ideas from the words on the page was found to be essential to comprehending text, thus learning from it. Beck and McKeown found that for the most part, students in elementary classrooms were not prompted to think about the text and how words and ideas connect. After studying elementary teachers during story read alouds, they found that most interactions tended to focus on literal ideas or simple

recall from text where children could answer their questions with one or two words. In an attempt to change teacher behavior, they developed Text Talk that helps teachers learn to give students more opportunities to respond to decontextualized language in meaningful ways.

Text Talk lessons primarily consisted of four major pieces: (a) introduction to the material, (b) interspersed open questions, (c) wrapping up, and (d) vocabulary instruction. Introduction to the material yielded interesting results. Beck and McKeown (2003) found that many times teachers provide too much background knowledge before the story is read. This digression of material can easily distract children. There is evidence that children may have difficulty separating story ideas from up-front talk (Nicholson & Imlack, 1981). This was interesting due to the body of research in reading that suggests that teachers should provide adequate background knowledge in order for comprehension to occur. Beck and McKeown (2003) also found that when teachers introduce certain material too soon, students forget it when they most need the information. Their suggestion is to wait to introduce important information of the story when it is introduced and truly needed for comprehension.

A second piece of Text Talk is concerned with teachers' questions, more specifically the use of open questions. Text Talk questions are intended to encourage children to talk about what is important in the text as it occurs. Open-ended questions encourage students to express ideas and make connections to the text. Open ended questions "invite students to produce a response: Although the question is asked in anticipation that the response will include certain ideas, both the form and the content of responses are left up to the child" (Beck & McKeown, 2003, p. 169). When open-ended questions are used, follow-up questions are necessary. Follow-up questions are asked after a student's initial response. "Follow up questions were related to the initial

question, and typically aimed for completion, elaboration, or clarification of initial response” (p. 169-170).

The third piece of the Text Talk format is the wrapping up of ideas where students are asked to think about some aspect of the story and explain its importance or relevance. Finally, a vocabulary component is essential to the Text Talk format. Teachers are encouraged to explain definitions of terms as they are encountered in the text and to choose words to concentrate on after the text is read. A typical text talk activity would ask students to identify how the word was used in the text, create definitions and their uses, give examples and nonexamples and have students use those words for real purposes.

Three issues were at the forefront of the research by Beck and McKeown (2003). These issues were: (a) the extent to which Text Talk influenced classroom discourse during read alouds, (b) the text to which teachers used Text Talk strategies on their own during read alouds, and (c) the effect Text Talk had on comprehension of material. Results indicated that an increase in student talk, and teachers’ use of open questions rose dramatically after Text Talk training was implemented in the study. Student talk was examined before and after the Text Talk strategy was implemented. Results show that during the baseline lessons, students’ responses were 2.1 words per response and after Text Talk was implemented students’ responses were 7.65 words per response. This indicates that the quantity of talk increased after the Text Talk training was implemented. Additionally, Beck and McKeown (2003) found that the “nature of questions strongly influences the nature of the response” (p. 173), a goal of this study.

Beck, McKeown, Sandora, Kucan, and Worthy (1996) developed an instructional strategy, Questioning the Author (QtA), which focuses on helping students become actively involved in reading text during the reading process. This strategy differs significantly from other

active engagement strategies that concentrate on interaction with text after it is read. QtA focuses on having “students grapple with and reflect on what an author is trying to say in order to build a representation from it” (p. 387). While students are reading, teachers pose Queries, which are designed to support and encourage students as they deal with texts. The Queries are designed to invite “understanding, interpretation, and elaboration by having students explore the meaning of what is written in the texts they read” (p. 387).

Unique to QtA (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997; Beck, McKeown, Sandora, Kucan & Worthy, 1996) is the idea that textbook authors are not all knowing. By teaching students and teachers to question the author’s credibility, this strategy can potentially shift comprehension problems from the student to the author of the text. By taking the pressure off the students, they may be “more likely to question text ideas and dig into their meaning” (p. 387). Ultimately, QtA (Beck et al., 1996) consists of four important features to aid students in comprehension of text: (a) it addresses text as the product of a fallible author; (b) it deals with text through general probes for meaning directed toward making sense of ideas in the text; (c) it takes place in the context of reading as it initially occurs; and (d) it encourages collaboration in the construction of meaning (p. 387).

The most revealing results of QtA (Beck, McKeown, Sandora, Kucan, & Worthy, 1996) come in the form of the types of questions teachers asked. As a result of QtA (Beck, et al., 1996), teachers shifted from simply retrieving information to constructing meaning, “particularly in extending the construction of meaning” (p. 395). The analysis reveals that a dramatic shift from factual questions to construction of meaning was present. In other words, once teachers learned to ask Queries that invited student engagement with text, students began to process textual information at higher levels. Additionally, a change in the nature of teachers’ questions produced

a change in classroom discourse patterns where teachers were no longer concerned with evaluating students' responses as correct or incorrect, but rather toward monitoring and guiding meaning making. It is apparent that QtA (Beck, et al., 1996) successfully improved questioning techniques, students' comprehension of text while opening the lines of communication in the classroom.

Written questions that students deal with in textbooks, standardized and non-standardized tests and teacher created materials are also important to consider. Andre (1979) reviewed research investigating the effects of having students respond to higher-level questions that were inserted in text every few paragraphs. He concluded that such a procedure does in fact facilitate better textbook learning than do factual question inserts. However, despite the effectiveness of higher cognitive questioning, the majority of classroom questions are factual or low-level in nature. Gall (1970) reported that only 20% of classroom questions require more than factual recall and Goodlad (1984) reported that only about 1% of classroom discussion asked students to give their own opinions and/or reasoning. In an examination of more than 61,000 questions from teacher's guides, student workbooks, and tests for nine history textbooks, more than 95% were devoted solely to factual/recall questions. This suggests that congruence between what teachers are asking and what textbooks require of students cognitively is, at best, inconsistent.

Determining how and what to study in relation to teacher questioning has been a debated concept for some time. Zahorik (1977) states, "Deciding what verbal behaviors to use in the classroom is a complex problem for all teachers. This problem is caused by the great number and variety of verbal behaviors that exist and by the vagaries of the classroom situations in which the behaviors will be used" (p. 50). More importantly, determining why teachers ask the questions they ask, what types of questions they ask, and when they might ask these questions

may very well be a variable means to study teachers' verbal behaviors in the classroom.

Zahorik's study, which built upon Bellack's 1966 questionnaire that described and provided examples of 14 types of teacher verbal behavior, revealed that 50% or more of the behaviors exhibited by teachers were simple praise, elaborate praise, problem solving questions, extension and directions. The issue, according to Pearson and Johnson (1978) is not whether or not to use questions in the classroom, but how, when, and where they ought to be used (p. 155).

Concerns for those students that struggle with reading are also at the forefront of studying teachers' questions. Wilson's study (1979) examined the processing strategies of average and below average readers in response to factual and inferential questions (based on John Dewey's 1910 work). Thirty-nine sixth and seventh graders were given three equivalent passages of 1500 words to read. With each passage students were given four inferential and four factual questions. Average readers performed better than below average readers on inferential questions on two of the three passages provided. The ability to synthesize and organize a response, and sensitivity to the author's style and message are cited as plausible explanations for these results. These results are attributed to the difference between the ability of good and poor readers to answer inferential questions "based on cognitive maturity levels" (p. 236). This study, although focusing on written questions as opposed to oral recitation, serves to inform teachers and investigators that questions can serve as a catalyst to thrust lower achieving readers to higher levels of cognitive reasoning through oral questioning.



## **Affective Domain**

Achievement and learner outcome, although important is not the only area of interest to investigate, other factors must be considered in addition to grades or increased test scores. Attitude of learners is also an important component of teacher questioning. Attitudes are generally considered to have three distinct components: affective, cognitive, and behavioral (Albrecht, Thomas, & Chadwick, 1980) Teachers help students gain knowledge about important information so that they will develop attitudes toward the material or information. When teachers engage in discussions with students, it allows the students to shape their attitudes toward subject matter. “Teachers would be justified in pursuing the goal of having students learn what this technique is and to develop their own attitude, whether it is positive or negative....” (Dillon, 1990, p. 36) During the process of discussion students state their opinions and feelings making their attitudes explicit and thus, “heighten their awareness” (Dillon, 1990, p. 37). This heightened awareness has the potential to ultimately increase student achievement.

The findings from research conclude that it is the teacher’s duty to design an optimal learning environment in which students are actively involved. “Students will not become active learners unless they are provided with opportunities for becoming involved in their learning and situations in which they can obtain skills necessary for successfully functioning in their learning” (Hunkins, 1976). Classroom questioning can serve as a catalyst to do just that.

## **Question Classification**

Many researchers have found value in classifying questions into distinct categories or schemes. Hyman (1979) suggests that a set of categories for questions is helpful because it allows teachers to see the commonalities, differences and patterns among items. “The prime requisite for a set of question categories is that the categories relate closely to the purpose of the question (p. 7).” This is when congruence becomes an important issue. Although there are many question classification systems used in educational research, there are a select few worth mentioning. Roth (1996) asserts that several assumptions need to be fulfilled before a question can be categorized as genuinely information seeking (p. 711). Being able to categorize one’s questions gives the teacher an evaluative tool and control of the learning situation, making the teacher the gatekeepers for the system (Lemke, 1990; Lynch, Livingston, & Garfinkel, 1983; Poole, 1994a, 1994b).

In addition to Bloom’s Taxonomy (1956) other researches have developed means by which teachers and investigators can classify questions. Pearson & Johnson’s Taxonomy of Questions (1978) consists of three categories of questions: textually explicit, textually implicit and scripturally implicit. Pearson and Johnson (1978) are quick to point out that they are not classifying questions per se; instead, they are “classifying relations that exist between questions and responses”. The teaching implications of such taxonomy are indeed worthy of mentioning. First and foremost, if students do not possess the requisite scriptural information or are deficient in their ability to make inferences, they will not likely be able to respond accurately to questions without explicit help from text or other sources. Also important in relation to teacher questioning and student responses is the fact that teachers may not always receive the nature of

comprehending/responding that they anticipate, even when asking a low-level question which has a textually explicit response.

Gallagher and Aschner's (1963) taxonomy also has a long history in the classification of questions. Gallagher and Aschner's classification system, based on Guilford's psychological framework (1956), used productive thinking of convergent and divergent processes. Guilford's model (1956) has three separate but interconnected dimensions: the content of the information, the operation performed on the information, and the products resulting from that processing. The feature of Guilford model that provided the most interest in relation to classroom questioning was its identification of convergent and divergent thinking. Gallagher and Aschner's studies on creatively led them to identify five types of questions in classrooms: cognitive-memory, convergent, divergent, evaluative and routine.

Taba (Hyman, 1979, p. 8) was influenced primarily by the psychological work of Piaget when she designed her system of categories using the perspective of cognitive function within teaching. In Taba's classification system there is hierarchy, but some questions are more complex than others. Questions in this system are categorized according to the type of response expected. Harlen (1985) developed a type of question he called "productive" in which students are required actively to engage with the materials at hand rather than answering the kind of formatted questions described by Lynch, Livingston, and Garfinkel (1983) Harlen (1985) recommended against the use of questions that ask for single answers, but encouraged questions that call for reflection and analysis.

Questioning the Author (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) used the strategy of *Queries* posed by teachers such as "What is the author trying to say?" or "What do you think the author means by

that?” (Beck et al., 1996, p. 387). These Queries are specifically designed to support and guide students to explore the text. Traditionally teachers pose questions that are narrow only asking literal or factual information. QtA allows students the luxury of understanding that many times the authors of textbooks may be to blame for lack of comprehension, taking the blame away from the student. Queries are “designed to initiate and focus discussion about text” (p. 389).

QtA (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) consists of two important types of Queries: Initiating and Focusing. Initiating Queries help begin the discussion of the text while Focusing Queries provide guidance to further the discussion.

Classifying teacher’s questions is as important as classifying the responses obtained. Many instruments are useful in classifying classroom interaction between the teacher and students. Flanders’ Interaction Analysis (1970) allows for teachers to obtain information in ten distinct categories which include; accepts feelings, praises and encourages, accepts or uses ideas of students, asks questions, lectures, gives directions, criticizing or justifying authority, student talk- response, student talk-initiation, silence and/or confusion. Flanders (1970) states “Classroom interaction analysis refers not to one system, but to many systems for coding spontaneous verbal communication, arranging the data into a useful display and then analyzing the results in order to study patterns of teaching and learning” (p. 27-29). Flanders does mention the limitation of using such an analysis stating, “to decide how teacher and college students can explore various patterns of interaction and discover for themselves which patterns they can use in order to improve comprehension” (p. 77).

Some would attest that interaction analyses are somewhat ambiguous. Delamont (1983) states that most interaction analysis systems ignore the context in which the data is collected and

the scales are usually concerned with observable behavior, which is overt, not taking into account the intentions of either the teacher or student. Simon and Boyer (1974) suggest that interaction analysis systems are useful if the observer is interested in only “small bits of action or behavior rather than global concepts” and point out that such interaction analysis are concerned only with what can be observed and measured and the boundaries become blurred. With that said, an interaction analysis system takes a snapshot of one class and one teacher during one lesson.

Overall, a balanced approach of questions is ideal for a comprehensive constructivist classroom according to more recent research studies. Studies (Gall, 1984; Hare & Pullman, 1980) have demonstrated that 80 percent of questions used in classrooms ask students to do something other than think critically about text or other material presented. Although the research suggests that teachers ask students higher-level cognitive questions or open questions, practice consistently demonstrates the opposite. Thoughtful and strategic questioning planning could very well yield the returns that teachers want from their students taking into consideration the topic, timing and diversity of students in the classroom.

### **Distinguishing Between Recitation and Discussion**

Dillon’s work in the area of teacher questioning has been influential in terms of teachers and investigators alike. Many educators assume that recitation and discussion are one in the same. Research indicates otherwise. Dillon (1984) makes a distinction between a discussion and a recitation. “Recitation is a rubric covering various activities called review, drill, quiz, guided discovery, inquiry teaching, Socratic method” (p. 50). A recitation is characteristic of displaying what they don’t know, making the teacher the keeper and dispenser of knowledge. In a recitation, the teacher primarily dominates the speaking floor. The teacher asks a question and the student

responds-a pattern ensues. On the other hand, a discussion is characteristic of group interaction, covering many activities in which teacher and students discuss what they don't know. A discussion calls for the teacher and student talking through and discovering the unknown.

Gall and Gall (1976) state that a recitation depends on recall of curriculum content; a discussion is teacher-student interaction and calls for complex thinking processes and attitude change (p. 168). Similarly, Stodulsky, Ferguson, and Wimbleberg (1981) state "Discussion involves longer exchanges between teacher and student, student and student and question soliciting student opinions and thoughts, not just right answers" (p. 123). Dillon (1981) adds that a discussion is a discussion if the teacher plans to have a discussion, if students rate it as a discussion, and if student talk accounts for at least 40% of total talk. In addition, Bridges (1979) states that in order for a discussion to take place the participant must examine and to be responsive to the different points of view put forth with the intentions of developing their knowledge, understanding and/or judgment on the matter under discussion (p. 16). Once a discussion is established the teachers' instructional objectives determine the type of discussion that will take place. Gall and Gall (1976) determine four types of discussion: moral development discussion, subject-matter mastery discussions, issue-oriented discussions, and problem solving.

On the other hand a recitation comes in a much different package. Gall (1984b) states that a recitation is basically a series of teacher questions, usually about textbook content, each eliciting a student response. "Recitations generally have a positive effect on students' intentional learning than on their incidental learning" (p. 42).

Much debate surrounds whether recitations are effective regardless of the cognitive level or types of questions. Gall and Gall (1976) found that recitations focusing on recently learned material are beneficial on measures of factual learning. Gall (1978) states that recitations are

effective for many reasons. Recitations give students practice recalling and thinking about material and content, and students receive feedback about the quality and accuracy of their responses. “Recitation incorporates two processes, practice and feedback, which are of proven effectiveness in strengthening knowledge and skills” (p. 44). The cueing effect, where questions provide cues that can focus students’ attention on information in text or lecture, is also improved during the recitation. Rosenshine (1971) found that students are more engaged during teacher-led activities, recitations with an academic focus, versus seatwork activities. Furthermore, recitations involve speaking and listening and “for many students, speaking and listening may be more motivating and less demanding than reading and writing” (p. 45). Dillon (1984) found in 26 high school discussions that students responded at least as much to statements as to questions, if not more. Dillon (1984) revealed that the use of alternatives together resulted in more and better discussion, more student talk, more students participating, more elaboration and more student questions. Dillon says, “A single, well-formulated question is sufficient for an hour’s discussion” (p.55). Dillon’s theory is that questions can very well foil a discussion “turning it into a recitation” (p. 56).

Whether an investigator or teacher decides to study recitations or discussions, it is apparent that the question, which can be manipulated by the teacher, has the potential to be powerful tool in terms of the outcomes it produces. Most importantly, in order for recitations to be effective, teachers and students must be trained in proper implementation.

## **Patterns Observed in Social Studies Classrooms**

At the heart of social studies instruction lays the complicated content that requires students to read, summarize, synthesize, and evaluate information found in textbooks. Many times, comprehension seeking is pursued through classroom discussion. Stodulsky, Ferguson and Wimpleberg (1981) found that discussion comprised only three percent of all time blocks in the 17 fifth grade social studies lessons. Discussion, as defined by the investigators, is longer exchanges between the teacher and students where student opinions and thoughts are important and there were no right or wrong answers.

Additionally, teachers strive to ask higher order questions as a means to spark discussion or critical thought in their students. Unfortunately, Wilson (1979) found that only about one half of students' responses were at the same cognitive level as the teachers' questions, and of the incongruent responses, one-third to one-half were at a lower cognitive level than the teacher's questions.

Teacher talk, as found by many investigators, dominates many classrooms. In a discussion, the goal is to have students dominate the speaking floor so that their ideas can build upon others' thoughts and responses or extend the discussion (Beck, McKeown, Sandora, Kucan, & Worthy, 1996). Thuraigam (2001) studied language use and interaction in five Singapore history classrooms. Teacher talk represented more than 50% of the total classroom talk and in some instances represented 70% of the total talk. On the other hand student talk consisted of approximately 28%. With teachers dominating so much of the classroom time that leaves little time for effective, constructive classroom discourse. Of the total classroom talk 22% of the talk concentrated on students' responses, and only 13% of the questions were open-ended in nature.



In-depth, constructive and strategic discussions can lead to increased sensitivity, knowledge, and insights on the part of the students. Strategic discussions have the potential to move students to higher levels of cognitive development. “Through discussion students can learn subject matter by creatively engaging with it, by synthesizing prior learning, by building on previously acquired knowledge and by internalizing the contributions of their classmates” (Wilén, 1990, p. 144). Planning and practice on the part of content area teachers is the key to creating effective strategic discussions.

Although discussions have been viewed as the most interactive form of classroom discourse, discussions are rarely found in classrooms. When teachers believe they are involved in a discussion, as indicated by self-report and external observation, the results indicate otherwise (Alvermann, O’Brien, & Dillon, 1987). This is unfortunate, because according to the Vygotskian perspective, discussion is the best method of teaching. It fosters cooperative learning between all the participants (Fowler & Wheeler, 1995), and reinforces the idea that the teacher is not the all-knowing provider of knowledge.

To involve students in skillful questioning, the process must be constant and consistent; it must become an art. Edwards and Westgate (1987) stated, “Investigators and practitioners need to be particularly attentive to the often limited and limiting quality of language experience which schools offer children” (p.5).

Research reviews indicate that although research dictates that teachers should ask higher-level cognitive questions to provide classroom discussion, the findings show otherwise. Poole (1988) described how the IRE pattern (teacher-initiation-student-response-teacher-evaluation) was used during a quiz review on the U. S. Constitution in an 8<sup>th</sup> grade social studies classroom. In terms of topic development she found that each teacher initiation “constitutes a test-question,

i.e. one to which the answer is already known” (p. 23). Similarly, Breeme and Erickson (1977) found that for students to be able to take part in school, they had to be able both to speak to the topic and speak within the initiation-response-feedback discourse pattern.

Furthermore, Stodolsky, Ferguson, and Wimpelberg (1981) identified the purposes for which teachers conducted social studies recitations. The introduction of new material rated the highest at 56%, review of new material accounted for 21%, and checking for understanding and/or clarifying accounted for 14% of the social studies recitations. Additionally, Stodolsky et al. (1981) found that recitations occurred more often in lower SES schools than in high SES schools. They concluded “For learning factual material; this pattern (recitation) may be the most effective method available” (p. 911).

The use of lower-level cognitive questions, which emphasizing the recall of facts, is quite common in social studies classrooms. This was evident in Stevens’s 1912 study and in Haynes 1935 study where he reported that 77% of the teachers’ questions called for factual information and only 17% could be categorized as requiring students to think. Over forty years later Gall and Gall (1976) characterized the teacher-student pattern of recitation as a large emphasis of lower-cognitive questioning. Research conducted in the 1960s produced similar results. Three studies, in particular, conducted in junior high social studies classes revealed that the major emphasis was on lower-cognitive level questions that required students to recall content (Crump, 1970; Godbold, 1969). Furthermore, Davis and Tinsley (1967) conducted two additional studies and found that secondary social studies student teachers asked memory-level questions in their classrooms and planned the same level questions to guide their class discussions.

## **Teacher Training/Staff Development**

Teacher training has been at the forefront of educational reform for some time now making professional development an important issue for school districts and teacher preparatory programs. Research concerning the impact of teacher training on questioning behavior has been conducted at both the preservice and in-service level. Emphasis has been placed on materials, techniques, and/or level of supervisory involvement.

This heightened emphasis on teacher training and accountability has prompted many researches to examine the impact that teacher training has had on the use of teachers' questioning behaviors. Prior to accountability issues, Howard (1970) examined materials used in such programs. Howard's (1970) study involved the development of materials for training teachers in appropriate questioning strategies in teaching reading comprehension. The use of questions that would promote higher-level cognitive processes was of particular emphasis. A control group and experimental group were both given reading passages for which the subjects were to write comprehension questions. The experimental group was given additional training in writing questions by working cooperatively. Analysis of pre- and post-tests determined that the experimental group wrote significantly more critical reading questions. The conclusion was that question behavior could be improved through training.

Rogers (1972) trained student teachers in effective questioning techniques and found that those student teachers that participated in the training program were more conscious of questioning as a powerful instructional tool. Similarly, Buck (1997) found that simple techniques could improve student achievement. By training teachers to call on students by name, as opposed to a voluntary basis, Buck found significant gains by treatment subjects in course achievement.

The simplicity of random oral questioning proved to be a simple and plausible means by which to question students.

In addition to this an increase in teacher wait time has had a positive effect on student achievement. Rowe (1986) configured a format to increase student achievement by increasing teachers' wait time. Rowe called her adaptation of wait time the 8-2 (high school teachers) 10-2 (college lecturers) format. In this format the teacher, specifically content area teachers, would lecture for 8 to 10 minutes, then stop for 2 minutes. In the two-minute time span, students would work in cooperative groups to share notes and help each other clarify concepts. The experimental groups following this format generally showed improved performance over the control groups on "more complex test items, more delayed retention, and more positive attitudes toward the subject and method" (p.47). The quality of student questions improved as a result. Rowe suggests this format is particularly helpful for students with special needs. Similar findings by Swift and Gooding (1983) demonstrated that when teachers wait 2-3 seconds after asking a question and again before asking the next, both the quality and quantity of student talk increases. These findings lead Swift and colleagues to develop their "strategies for engendering true discussions" (Gooding, Swift, & Swift, 1983; Swift, Swift, & Gooding, 1984).

Wolf, Mieras and Carey (1996) used case studies to prepare preservice teachers to become more knowledgeable and skillful in their use of classroom questions in relation to literary text. As part of an undergraduate course, students were made aware of successful questioning strategies. Overtime the preservice teachers' question types shifted in amount and content. The preservice teachers learned to create or at least reflect on their questioning techniques.

The research on teacher questioning offers numerous suggestions for how teachers can and should present more effective questioning during recitations and discussions in classrooms. Dillon (1982b) stated that teachers should only ask a question during a discussion when it is really necessary and students are perplexed and ultimately need the information; to define an issue for discussion, to ensure hearing the students correctly; and to regain control of discussion. Dillon suggests that teachers do not ask a question at every turn and suggest teachers ask 'why' questions. Ciscell (1987) proposed the use of four questioning skills during a discussion. These skills included: the use of wait-time, the use of redirection in the teacher increases the number of students participating without commenting on each answer separately, the ability to prompt students by giving hints or clues and to provide age-appropriate rewards for correct responses.

In a like manner, Rogers (1972) conducted seminars that focused on the purpose and uses of cognitive levels of classroom questions with student teachers. Microteaching of peers and role-playing were significant components of the program, which proved to be successful. Videotapes of the student teachers were analyzed during a four-day unit. The experimental group, who were trained, asked a higher mean percentage of translation and interpretations questions than did the control group. This supports the notion that teachers' questioning patterns can be altered to improve the cognitive level of questions asked in the classroom by using a systematic program.

Finally, Palincsar, and Brown (1984) used a technique to improve students' questions called Reciprocal Teaching. In this strategy the student and teacher take turns asking each other questions about a passage, either expository or narrative in nature. Together the teacher and student read a paragraph, and with the guidance of the teacher, identify and integrate what is happening. Once this is completed, they predict what will happen next in the passage. The

teacher and student then switch roles. Through modeling, the teacher, models for students the method for correctly constructing appropriate and adept questions. The same is true for Questioning the Author (Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L., 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) where the teacher and students work together to improve questioning strategies by asking the text questions to promote higher-level cognitive critical thinking skills. As students read the text, the teacher intervenes at selected points (segmenting) and poses *Queries* or probes to initiate discussion. These *Queries* act as catapults to ensure students are asking the text questions. Both students and teachers work collaboratively “to grapple” with ideas allowing the students opportunities to hear their classmates, question and consider alternatives and test their own ideas. If questions do have the power and potential to engage students at higher cognitive levels, then “attention should be focused on this skill in teacher preparation and staff development programs” (Rogers, 1972, p. 62).

### **Summary**

Teachers’ questions have a long history with an effect on what teachers are currently doing in their classroom today. Teachers’ questions can have a negative or positive effect on learners’ outcomes, which lies at the heart of this study. The use of higher-order cognitive questions can potentially improve student achievement and produce authentic, purposeful discussions in classrooms that raise content awareness and ultimately students’ learning gains. Questions have the potential to motivate students to think on a cognitive level that may not have been achieved otherwise. Questions are used to guide learning, direct students’ attention, assess comprehension, elicit depth processing, initiate metacognitive processes, and produce curriculum outcomes of the teacher and the district.

Teachers of middle school social studies face a particularly unique situation as they strive to build upon previously learned historical curriculum while juggling the middle school student. Klingele (1979) stated, “Very little emphasis has been placed on understanding the student in the middle grades” (p. 18). Generally all students experience “abrupt changes in methods of instruction and discipline and in the curriculum which made it difficult for them to adjust themselves to the new situation” (Bent, Dronenber, & Boardman, 1970, p. 145). The literature teaches us that social studies classrooms are predominately teacher driven leaving very little time for student discussions. With this being the case, teacher training should focus on how to make the most of the time students are in the social studies classroom. Therefore, this study will be a presentation and discussion of social studies teachers questioning patterns and behaviors as they present new material, review previously learned material and mold the young minds of today. This study will also attempt to theorize that an intervention staff development will have a positive effect on the outcomes of learners in two middle school social studies classroom.

## **CHAPTER III**

### **METHODOLOGY**

The purpose of this chapter is to describe the methodology that was used in this study. The investigator begins by describing the study's design, district participants and curriculum. The investigator concludes by describing the procedures for data collection and analysis. The goal of the study was to document and improve the questioning strategies/techniques/patterns of two middle school social studies teachers.

#### **A. Design of Study**

A detailed observational case study design was used in this research. Best (1970) states that case studies are used to focus on a single case or a limited number of cases. He further states, "A study of a number of these individual cases could be expanded into a research project, particularly where the typical aspects of each case are contrasted or compared for the purpose of arriving at a greater understanding of human behavior, or for the purpose of discovering new generalizations" (p. 122). According to Cox (1981), the main purpose of a case study research is "to describe, in detail, certain characteristics of the participants. A case study is an ideal methodology when a holistic, in-depth investigation is needed (Feagin, Orum, & Sjoberg, 1991). Merriam (1998) adds, "The interest [in case study design] is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation" (p. 19). Within the case study tradition, the investigator described the characteristics of two middle school social studies teachers' questioning patterns and the effects an intervention staff development had on their questioning patterns.



## **B. Description of District**

The school district selected for this study is an urban school district in Southwestern Pennsylvania serving 4,949 students in grades K-12, from five economically diverse communities. This particular city suffered from an economic downturn when the steel mills and related industries left the area. Student enrollment in each school shows a mix of socio-economic background and cultures. Using the free and reduced lunch rate, which is an established indicator of poverty, this particular school has a free and reduced lunch rate of 73%. According to the Department of Welfare, 56.9% of the district children live in families receiving Temporary Aide to Needy Families and considered low income. Of the 27 census tracts located in Allegheny County, having at least 20% of the population living below the poverty level, six tracts are in this particular city. The racial composition of the school district is 46% white, 53% African American, and one percent other minority groups. Physical plants in the district include three elementary buildings (grades K-3), two intermediate buildings (grades 4-6), one middle school (grades 7-8) and one high school (grades 9-12). This particular middle school was chosen because of (a) its affiliation with the investigator, (b) availability and willingness of participants, and (c) support and cooperation of administration.

## **C. Description of Participants**

### **a. Selection**

To initially identify teachers who would participate in this study, a “Teacher Questioning Behavior Survey” was administered to the middle school staff in September 2004 (Appendix B). The questionnaire asked related information about the teachers’ professional and academic background, teaching experience and philosophies of pedagogy. Sixteen of the 32 teachers

responded. The mean number of years teaching for the respondents was five; 88% indicated they often or always used questioning as their main instructional approach to teaching content. Over half (56%) planned their questions prior to teaching a lesson.

From the survey data, the investigator selected two teachers to participate in the study. Both indicated in their survey response that the majority of their instructional time is devoted to question asking (75% and above). These teachers were chosen based on availability, content area knowledge, principal recommendation, and willingness to participate.

The two teachers voluntarily accepted the invitation and were extensively informed of all aspects of the study. Both acknowledged that they were willing to complete surveys and participate in interviews to provide the investigator with the necessary background knowledge. They also agreed to a weekly observation of their classroom instruction by the investigator. Both teachers agreed to partake in staff development training during the study. The teachers also agreed to keep a reflective teaching journal for the duration of the study.

#### **b. Participants**

The two teachers in this study range in experience from three to six years of teaching. Teacher One (T1) is a white female who has been teaching eighth grade social studies full-time for three years, with a total of six years in the district. The administrators in T1's building consider her to be an exceptional teacher. In addition to her extensive content knowledge, this teacher has an excellent rapport with students. Academically, this teacher holds a BA in secondary education/social studies and recently completed her MA in social sciences and criminal justice.

Teacher Two (T2) is a white male who has been teaching seventh grade social studies for three years in this school district with two of those years at the middle school level. This teacher holds a BA in secondary education/social studies and a MA in secondary education. The teacher

is considered to have extensive content knowledge and be an exceptional teacher by the administration and considered a “favorite” among students.

#### **D. Description of Social Studies Curriculum**

In the 2003-04 school year, a literacy coordinator was hired from the existing middle school staff to implement reading and writing across the curriculum. On a monthly basis the social studies department (four teachers) and the literacy coordinator met to discuss the implementation of reading and writing strategies in their respective classrooms. At the same time, the middle school staff was preparing for a merger of the two existing middle schools. Periodically, the teachers would meet to formulate a comprehensive curriculum that would successfully incorporate reading and writing into their content areas. From those meetings the social studies department rewrote their curriculum to assure that it was aligned with Pennsylvania Academic Standards and applicable national standards. The eighth grade American History curriculum summary reads as follows:

The 8<sup>th</sup> grade American History curriculum takes a journey through colonization, settlement, the American Revolution, forming a new nation, westward expansion and reform. The year concludes with a close examination of the Civil War and Reconstruction. Students will begin by exploring why the Americas attracted Europeans, why they brought enslaved Africans to their colonies, and how Europeans struggled for control of North American and the Caribbean. Students will examine how political, religious and social institutions of European economic life took root in the colonies, and how slavery reshaped European and African life in the Americas.

As the students move on to study the American Revolution, they will be expected to examine and analyze the causes and effects of the revolution along with the ideas and interests involved in forging the revolutionary movement. They will be expected to summarize the impact of the American Revolution on politics, economy and society. Students will identify the institutions and practice of government created during the Revolution, as foundations of the American political system based on the U. S. Constitution and the Bill of Rights.

The second half of the school year takes off with the Era of Expansion and Reform. Students will trace U. S. territorial expansion between 1801 and 1861. Students will then analyze how this expansion impacted and affected relations with external powers and Native Americans. Students will be able to explain the causes and effects of the Industrial Revolution, increasing immigration, the rapid expansion of slavery and the westward movement and how it changed the

lives of Americans and led toward regional tensions. Students will be expected to describe the sources and character of cultural, religious and social reform movements of the antebellum period.

The year concludes with the examination of the causes of the Civil War, an analysis of the course and character of the Civil War and its effects on the American people along with the evaluation of how various reconstruction plans succeeded or failed (McKeesport Area School District Curriculum Guide, 2004).

The seventh grade World Geography curriculum is described as follows:

The emphasis of the 7<sup>th</sup> grade social studies curriculum is on geography. The students will study the relationship between the people of the earth and their physical environment as related to the Five Themes of Geography. Students will apply and develop the skills of using maps, globes, graphics and reference materials. Students will use these tools to examine the relationships between people and their economic, political and social environment.

Selected people and cultures of the world will be addressed using a thematic or regional approach. Language Arts will be integrated throughout the course of study. Classroom instruction will be directed toward the understanding and appreciation of the cultures of other people through the development of such key concepts as language, technology, institutions and belief systems. Key areas of focus will be on Early Civilization, the Egyptians, the Greek Empire, the Roman Empire, Far East, the Middle Ages, and African Empires. The influence and impact of these cultures have had on more recent world events will also be emphasized (McKeesport Area School District Curriculum Guide, 2004).

## **E. Data Collection**

### **a. Observations**

The investigator served as a participant observer for approximately ten hours in each classroom five hours to collect baseline data and five hours to collect post intervention data. Each teacher taught the four initial texts to students. Lessons were audio taped and transcribed using a Question Tally Sheet (Appendix C). The Question Tally Sheet was created using the *Queries* categories from Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). This form was used to tally teachers' questions once the classroom lessons were transcribed to document students' responses to these classroom

questions. The Tally Sheet for Student Responses was used (Appendix D). After the intervention staff development was implemented the teachers taught the same four texts to different students.

After each observation, the investigator tallied the types and frequency of questions and responses. The observation, being the main research tool, served as the means by which patterns of teachers' questions and students' responses were identified (Stenhouse, 1979). After each weekly observation the participants wrote in their reflective teaching journal. After the initial baselines lessons were observed and transcribed, the investigator conducted staff development on the effective use of QtA with both participants at the midpoint of the study.

Observations of both participants were conducted prior to the start of the study as a means to familiarize the investigator, participant and students with the process. Students and parents were informed of the investigator's weekly visits and were invited to exclude their child from the process. No parent excluded his or her child from the process.

#### **b. Questionnaire**

Several data collection tools were used in the preliminary stage of the case study. A questionnaire was the first research tool used by the investigator to collect background knowledge on teachers (Appendix B). Such data included a summary of the teacher's academic background, number of years teaching, additional in-service or graduate level/professional training, philosophy of teaching, and knowledge of questioning strategies. Once this data was collected and analyzed, the investigator then decided if these two teachers were comparable on a number of dimensions. An analysis of the preliminary interview indicated that these teachers were indeed comparable in terms of teaching experience, training, educational philosophies and knowledge of questioning strategies. For example Teacher One (T1) has been teaching middle school for four years and Teacher Two (T2) has been teaching middle school for three years.

Both teachers hold BA degrees in Secondary Social Studies Education. In addition, both teachers have earned masters degrees in related fields. Likewise, both teachers were cognizant of Bloom's Taxonomy (1956) and the relationship it has to questions.

The Teacher Data Sheet is a survey that was developed and administered to the two participants prior to the start of the study (Appendix E). Each participant was asked to answer the following questions: (a) total number of years teaching social studies, (b) number of years teaching middle school, (c) description of educational background, including graduate work, special training and/or additional staff development, (d) philosophy of education, and (e) knowledge of questioning strategies.

### **c. Interview**

Prior to the classroom observations, each subject was asked to participate in a Pre-Study Interview (Appendix F). The purpose of the interview was to establish what knowledge each teacher possessed about instructional questioning strategies. The questions were designed in a manner that could potentially reveal the cognitive process of the teacher when asking questions in their classrooms. The development of the interview was a vital part of the interview technique. Bradburn and Sudman's (1979) findings indicate that an open-answer format is more useful than providing the interviewee with alternatives from which to select. To avoid bias and reluctance on the part of the interviewee, the demographic data was collected prior to the interview process (Hopkins, 1976) by the investigator. Questions for this interview, developed through a piloting process, included:

- (1.) Estimate how often you use questions as your dominant instructional strategy.
- (2.) Explain the reasons you use questions in your classroom.
- (3.) How do you typically determine who will answer a question in your classroom?

(4.) How do you plan your questions prior to teaching a lesson?

(5.) Estimate how often and the reasons you use a discussion method in your classroom?

#### **d. Pretest**

A pretest was administered to the 16 teachers who originally completed the Teacher Questioning Behavior survey prior to the beginning of the study (Appendix G). The purpose of the pretest was to determine what, if any, questioning knowledge the teachers possessed and whether or not they would make appropriate subjects. The teachers were given an expository passage to read by Charles L. Ballard entitled “The South Pennsylvania Railroad” (Appendix G). The teachers were then instructed to write ten questions they would typically ask students to answer. Appendix H displays the participants’ answers to the pretest.

#### **F. Procedures**

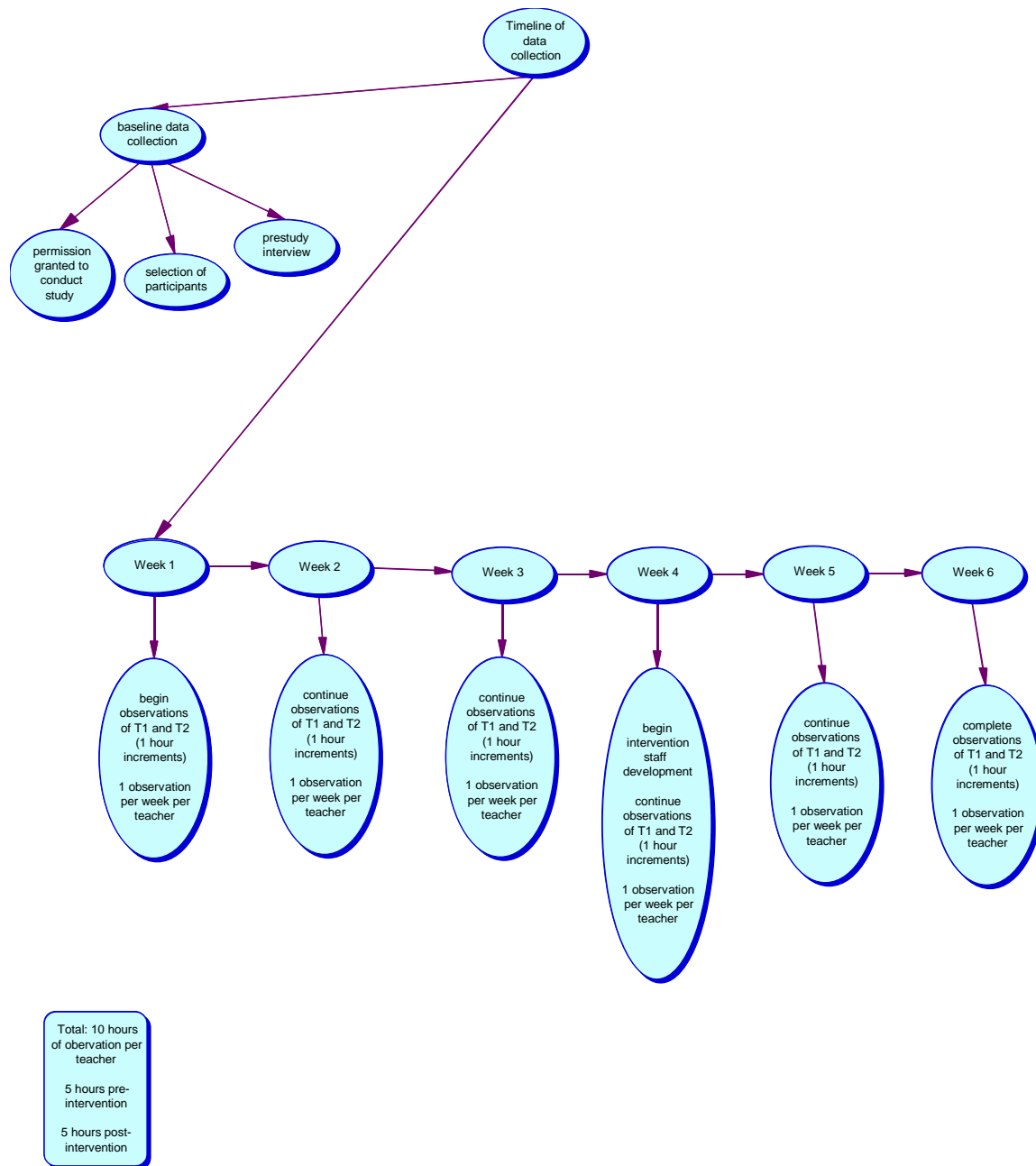
This study used a case study format. It sought to explore the effects that an intervention staff development could have on two middle school social studies teachers’ questioning behaviors. The following procedures details the sequential order in which the study unfolded.

- a. The participants were selected based on availability, willingness to participate, subject-specialty, recommendations from administrators, and knowledge of questioning strategies.
- b. Permission was requested and granted by superintendent of schools.
- c. A pre-observation interview, designed by the investigator, was conducted to determine the subject’s perceptions of his/her own questioning behaviors employed in the classroom.
- d. Observations were conducted using an audio recording device. The classroom discourse was transcribed and extensively reviewed in order to describe what was

- occurring in each setting. Patterns, commonalities, disparities and any other pertinent questions, responses and patterns were examined and compared in an attempt to analyze and paint an accurate picture of middle school social studies classrooms.
- e. Once transcribed, the questioning patterns of the subjects were tallied using a tool based on Questioning the Author (QtA) (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) in order to determine the level of student engagement with varying texts.
  - f. Responses by the students were also audio- taped, transcribed, and analyzed to determine question/response congruency.
  - g. An intervention staff development, based on QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) was administered to both teachers in an attempt to improve questioning behaviors in an effort to increase student achievement and engagement with text. This intervention was conducted at the midpoint of the study.

Figure 1 represents the Data Collection Timeline used for the study. A total of ten hours of observation was conducted per teacher.





**Total Hours: 10 observation hours per teacher**

**Figure 1: Data Collection Timeline**

Diagram created in Inspiration® by Inspiration Software®, Inc

## **G. Staff Development**

The intervention staff development was designed by the investigator as a vehicle for improving the participants' questioning strategies. This improvement was aimed at training the participants in Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) strategies, which could potentially improve student engagement with text, active participation of students in classroom discussion, and increase the participants' abilities to improve their classroom communities.

The participants met with the investigator for six hours to participate in the intervention staff development. The four-phase program was adapted from the work research conducted by Beck and her colleagues. Phase 1: Rationale/Theory included an introduction to Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) and discussion of the need for improved questioning strategies in each classroom. Moreover, this phase included viewing a videotape of a lesson. The participants watch the lesson and tallied the types of questions asked based on the questioning categories of Questioning the Author.

Phase 2: Demonstration/Guided Practice required participants to take part in a Questioning the Author training program developed by the investigator.

Phase 3: Debriefing/Reflection required participants to reflect on their training with the investigator. This phase of the intervention

Phase 4: Coaching is the final component that requires the participants to train a colleague in Questioning the Author strategies.

## **H. Data Analysis**

### **A. Coding of Teachers' Questions**

Once the classroom observations were audio taped and transcribed, the data was then plotted on a tally sheet, which corresponds with the query categories from Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) The classifications include Retrieval of Information, Construction of Message, Extension of Discussion and Checking for Knowledge. These behaviors were tallied as the teacher asked students questions in relation to social studies text or other related content material.

### **B. Coding of Students' Responses**

Student responses were audio taped, transcribed and tallied using a coding system developed by the investigator. Responses/behaviors were categorized in the following manner: incorrect response (-), teacher prompted or encouragement (=), correct response, as determined by the teacher, (+), response that cannot be classified as correct or incorrect (X), and positive teacher feedback or praise (O). The investigator also paid special attention to the number of questions asked by students either of their teacher or classmates.

## CHAPTER IV

### ANALYSIS OF DATA

#### **A. Introduction**

This study pertains to two middle school social studies teachers employed in a low socio-economic school district in Western Pennsylvania. The study focuses on the questioning patterns of the aforementioned teachers and the effects of an intervention staff development on their questioning strategies. The intervention staff development is based on the work of Beck, McKeown, Hamilton, & Kucan (1997) and Beck, McKeown, Sandora, Kucan, & Worthy (1996), Questioning the Author (QtA). Using Constructivist Grounded Theory (Glaser, 2001) as a framework for analysis, it was evident that the research scene would produce data as it emerged throughout the study. Both teachers indicated a desire to improve instructional planning and execution. Furthermore, both teachers were similar in the number of years experience, and pedagogical implementation of using questions as a vehicle to check for comprehension.

Presented in this chapter is an analysis of questions from transcribed lessons *prior* to the intervention staff development, questions transcribed from lessons *after* the implementation of the intervention staff development (QtA), reflective teaching journals, students' responses and student generated questions. The chapter is divided into narrative sections, each devoted to a particular text. Each section tells a story followed by an analysis.

#### **B. Baseline Lessons**

Teacher One (T1) is a white female that has been teaching middle school social studies for four years with eighth graders. She holds a BA in secondary education/social studies and a MA in social sciences and criminal justice. Evidence from colleagues indicates that she is considered to

be an exceptional teacher by the administration of her building. Observations of interactions with students indicate that she has excellent rapport with students and extensive content and pedagogy knowledge.

When asked to participate, she was enthusiastic to be part of the study. She serves as a content area coach for the building and she believed this work would give her even more knowledge about how students interact and deal with text. She was interested in integrating effective reading strategies into her classroom that focus on informational text.

Teacher Two (T2) is a male seventh grade social studies teacher who has been teaching for four years. He holds a BA in secondary education/social studies and a MA in Secondary Education. Evidence from colleagues indicates that he is considered to be an exceptional teacher and considered a “favorite” among students. When asked to participate in the study, T2 was enthusiastic and receptive to the idea similar to T1. Like T1, he was interested in providing students with strategies to deal with expository text.

Once selected for the study, T1 and T2 taught four different pre-selected texts to their students. The teachers were instructed to teach the texts as they normally would teach them as part of their required curriculum. Each lesson was audio taped, transcribed and coded using the observational tool based on Beck, McKeown, Hamilton, & Kucan (1997) and Beck, McKeown, Sandora, Kucan, & Worthy (1996). Each question was categorized as either Retrieval of Information, Construction of Message, Extension of Discussion, or Checking for Knowledge. Any questions that were rhetorical or procedural in nature were excluded from the analysis.

## 1. Text One: Baseline Lesson

Text One was entitled *Carrie Chapman Catt: 1859-1947*, which focused on the accomplishment of the League of Women Voters and Catt’s successful campaign for the passage and ratification of the Nineteenth Amendment. T1 asked a total of 72 questions in a 45-minute class period, nearly three quarters of which probed for retrieval of information. Table 1 indicates the type, frequency, and percentage of questions asked during the lesson. Questioning categories are based on Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996).

Table 1

Teacher One (T1): Type, Frequency (and Percentage) of Questions Asked During Text One Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
51 (71%)	6 (8%)	3 (4%)	12 (17%)	72

As indicated in Table 1, T1 asked 51 (71%) Retrieval of Information questions, which are basic recall of information found in the text. An example of such a question asked by T1 was, “What amendment did Carrie Chapman Catt fight to pass?” The answer is found in paragraph one of the text. A student responded appropriately, “The Nineteenth Amendment.”

The second category found in Table 1 is Construction of Message. When asked this type of question, students are required to make connections with the text and draw inferences from that text. T1 asked a total of six (8%) Construction of Message questions. An example of this

type of question asked by T1 was, “Do you think many women went to college at this time?” Since the text states that Carrie Chapman Catt attended college right after high school, and she was born in 1859, the teacher was asking students to make an inference about whether or not women typically attended college during that time period. Students were required to infer based on the knowledge they gained from the text. Students responded, “No.”

The third category found in Table 1 is Extension of Discussion. Questions asked in this category include any question that requires students to build on a response from another student adding additional information to enhance the discussion and extend the construction of meaning. While teaching Text One, T1 extended the classroom discussion three times (4%) during the lesson. An example of the teacher extending the discussion included the restatement, “She [student’s name] said that she is devoted to education, tell me how that might be true.” The student was then required to extend the dialogue by citing an example of how she or other classmates show their dedication to education. A student responded, “I study at night, come to school on time and do my work.”

The fourth category, Checking for Knowledge, encompasses any question that taps students’ background knowledge. T1 checked for knowledge a total of 12 times (17%) during this lesson. An example of such a question asked by T1 was, “When you are devoted to something, do you spend a great deal of time doing it?” This example illustrates the type of question asked of students when the teacher was checking for knowledge. The teacher was requiring the students to tap previous knowledge in order to define the term *devoted*. One student responded, “Yes.” No extension of discussion ensued.

Table 2 represents the type, frequency, and percentage of questions asked by T2 during the same lesson using the text entitled *Carrie Chapman Catt: 1859-1947*. Like T1, T2 also asked a total of 72 questions during the 45-minute class period.

Table 2

Teacher Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text One Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
47 (65%)	0 (0%)	4 (6%)	21 (29%)	72

As indicated in Table 2, T2 asked 47 (65%) Retrieval of Information questions while teaching Text One. An example of this type of question asked by T2 was, “Who is Carrie Chapman Catt?” The student responded, “She led a campaign for the ratification of the 19<sup>th</sup> Amendment.” This information is directly stated in paragraph one of the text.

The second category, Construction of Message, requires students to make an inference. T2 did not ask any questions in this category during the lesson of Text Two.

The third category, Extension of Discussion, requires students to build their response based on another classmate’s response in an effort to further the discussion of the topic. T2 asked four (6%) questions in this category. By guiding students through the text and defining unfamiliar vocabulary terms, the teacher accomplished this. An unfamiliar vocabulary term



encountered by students was the word *execute*. The teacher asked, “What does *execute* mean?” A student quickly responded, “To kill.” The teacher then extended the discussion by stating, “Put kill in that sentence and see if it makes sense. Does that make sense? Does she want to kill her strategy? What does she want to do?” A student acknowledged, “Make it better.” The teacher continued, “Then how did she execute her goal?” The teacher extended the discussion further by asking, “So execute means to?” Another student answered, “Make it better.” No extension of discussion occurred following this exchange.

The fourth category, Checking for Knowledge, includes questions that activate schema. T2 asked a total of 21 (29%) questions in this category. The first question of the lesson was a Checking for Knowledge question. The teacher asked, “Does anyone know when women got the right to vote?” Although three students answered incorrectly before the teacher said the correct answer, the teacher was requiring students to retrieve previously learned information, although students did this with no success.

### **Analysis of Baseline Lessons of Text One**

Table 3 compares the type, frequency, and percentage of questions asked by T1 and T2 during the Text One baseline lesson. Both teachers asked 72 questions during the lesson of Text One with the highest percentage of questions being Retrieval of Information.

Table 3

Teachers One (T1) and Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text One Baseline Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
T1	51 (71%)	6 (8%)	3 (4%)	12 (17%)	72
T2	47 (65%)	0 (0%)	4 (6%)	21 (29%)	72

T1 asked 51 (71%) Retrieval of Information or basic recall questions while T2 asked 47 (65%) of the same type of question. This type of question requires students to look at the text and find the information. Checking for Knowledge questions yielded the second highest percentage of questions with T1 asking 12 (17%) Checking for Knowledge questions and T2 asking 21 (29%). As indicated in Table 3, a small percentage of questions asked by both teachers are present in both Construction of Message and Extension of Discussion categories.

Based on the frequency and percentage of Retrieval of Information and Checking for Knowledge questions asked by T1 and T2, the evidence suggests that both teachers questioned to ensure that their students gained adequate factual level content knowledge from the text. T1 asked 51 (71%) Retrieval of Information questions and T2 asked 47 (65%) of the same making it quite clear that the teachers felt the material warranted an abundance of recall questions as a means to check for comprehension. Text One was saturated with names and dates. To a reading professional, the approach to teaching this text may be somewhat different. T1 commented,

“That’s a lot of information packed into one page,” after the lesson. As content area teachers, they may want to ensure students understand the material in order to meet curriculum requirements.

T1 asked 12 (17%) Checking for Knowledge questions while T2 asked 21 (29%) questions in the same category. Since the text made connections to previously learned material, it would be pertinent for the teachers to ask questions of this type in order to help students make connections between new and previously learned information. Unfortunately in both cases, students seemed to lack sufficient background knowledge to complete the task successfully. An excerpt from T2’s reflective journal supports this claim. He stated, “The students had a difficult time because of the insufficient background knowledge and lack of vocabulary skills to draw meaningful conclusions of mastery.” This quote supports the assertion that schema activation or discussion may have alleviated this problem or simply a more efficient alignment of supplemental texts with curriculum goals and objectives. That is to say if students were reminded of the information or revisited the information in some way, comprehension may have come more easily to students. Simply revisiting some important terms or concepts prior to learning or reviewing briefly could possibly support students as they make, or attempt to make, connections between previously learned material and the newly presented material.

Construction of Message and Extension of Discussion questions ranked lowest in types of questions asked. Eight percent of T1’s questions were Construction of Message while T2 asked no questions in this category. Three (4%) of T1’s questions were Extension of Discussion and four (6%) of T2’s questions were the same. Based on the teachers’ reflective journals this may be due to the fact that each teacher felt the content was somewhat difficult for students and did not extend much beyond the textual information to encourage higher-level cognitive functions.

After each lesson the teacher wrote in a reflective teaching journal about the lesson. T1 wrote the following:

Students were aware of and verbalized their purpose for reading. Before reading we reviewed our character map. As we read aloud, I paused for clarification and comprehension. Students seemed uninterested in the text as an informational piece but were actively engaged in completing their graphic organizer. Students were able to gain basic level identification information from [this] activity. Students were able to make personal connections to the text only when discussing the unfortunate events in character's personal life.

T2 wrote the following after teaching Text One:

In class we were trying to link the suffrage movement of women to The Civil Rights Movement of the 60s. Drawing comparisons between Carrie Chapman Catt to Martin Luther King Jr. The students had a difficult time because of the insufficient background knowledge and a lack of vocabulary skills to draw meaningful conclusions of mastery. However, I do feel that they understood that the path to voting for both women and blacks was a result of hard work and struggle.

Requiring the teachers to keep a reflective teaching journal served a valuable two-fold purpose. The first purpose was to prompt the teachers to reflect immediately after they taught the material while the experience of the lesson was still fresh in their mind. By asking teachers to

write immediately after the lesson, the investigator could analyze how the teachers felt about how well the lesson unfolded. The second purpose was to make the participants aware of their questioning patterns and instructional objectives. The investigator could then analyze how the teacher felt about each process. For an outsider or investigator, it is easy to speculate what took place during the lesson. Did the students “get it?” Is the teacher getting frustrated with students’ lack of comprehension? Would the teacher teach this lesson differently given the opportunity? The reflective teaching journal gives the investigator a window into the teachers’ thought processes and their cognitive and affective domains.

Table 4 represents the teachers’ questioning goals as stated in their reflective teaching journals as well as the students’ engagement goals as identified by the teachers in those same journals. Table 4 represents the reflections based on Text One.

Table 4

Teachers One (T1) and Two (T2): Reflections on Text One Baseline Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	clarification/ comprehension	retrieve factual information from text
T2	comparison/ comprehension	draw conclusions/ retrieve factual information

Table 4 characterizes the aforementioned goals of each teacher as written in their reflective teaching journals. As pertains to this study, it was of paramount importance to analyze the goals each teacher set forth for the lesson. Furthermore, analyzing the teachers’ reflections provided insight into the instructional goals planned by each teacher.

The instructional goals of T2's Lesson of Text One were misaligned with the instructional implementation. In other words, what the teacher wanted to accomplish, in each case, did not occur. This is sustained by T2's reflective journal entry. He writes, "The students had a difficult time because of the insufficient background knowledge and a lack of vocabulary skills to draw meaningful conclusions of mastery." In other words, what the teacher wanted to accomplish and what was accomplished are two distinctly different things.

It is worth noting the pattern that exists between the teachers' questioning goals and the types of questions asked by both teachers. As noted in Table 4, each teacher was interested in comprehension of the text, the ultimate goal of reading. The means used to obtain this goal were primarily Retrieval of Information questions. Fifty one (71%) Retrieval of Information questions were asked by T1, and 47 (65%) Retrieval of Information questions were asked by T2. The evidence suggests that the teachers' goals were comprehension of factual information, which is exactly what occurred.

## **2. Text Two: Baseline Lesson**

The second text selected to read with students was entitled *The Four Freedoms*. This relatively short reading was an excerpt of the State of the Union address given by FDR in January 1941. The reading was prefaced by a paragraph introducing the speech and followed by a paragraph explaining the Lend-Lease Program and the bombing of Pearl Harbor in 1941. Table 5 represents the type, frequency and percentage of questions asked by T1 during this lesson. A total of 42 questions were asked during this lesson.

Table 5

Teacher One (T1): Type, Frequency (and Percentage) of Questions Asked During Text Two

Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
22 (53%)	0 (0%)	6 (14%)	14 (33%)	42

As indicated in Table 5, T1 asked 22 (53%) Retrieval of Information questions during this lesson. An example of this type of question was, “Who wrote this article and when?” A student responded appropriately by stating the author and date, which is printed at the top of the page.

T1 did not ask any Construction of Message questions. Questions of this type would require students to make inferences, based on information learned from the text.

The third category of questions, Extension of Discussion, requires students to keep the discussion going in the classroom. The teacher facilitates this extension by the questions she asks or by probing and prompting students. T1 asked six (14%) Extension of Discussion questions while teaching Text Two. An example of this extension occurred at the beginning of the lesson when the teacher asked students to tap their background knowledge. She asked, “Who came here for religious freedoms?” The students responded appropriately, “The pilgrims.” The teacher then extended the discussion by prompting the student to “Tell me more.” This led a student to

explain the answer in detail giving other students the opportunity to participate in the exchange, which would display their knowledge of the subject. No students chose to participate.

The fourth category, Checking for Knowledge, includes questions that tap students' background knowledge. By requiring students to reach into their own experiences/knowledge can potentially increase comprehension because students are making personal connections. The teacher asked 14 (33%) Checking for Knowledge questions during the lesson. At the end of Text Two, T1 asked students to make a personal connection to the text that was used to check for comprehension. One such example occurred when T1 asked, "Which of these four freedoms do you feel is most important and why?" Each student in the classroom was required to answer this question. One student responded, "I think freedom of speech is important because I like to say what I'm thinking." Another student added, "Freedom of religion since that is what we are fighting for now in the war." After each student's response, the next student was required to answer. No prompting, probing or extending for additional information occurred.

Table 6 indicates the type, frequency and percentage of questions asked by T2 during the lesson of Text Two. T2 asked a total of 60 questions during the lesson.



Table 6

Teacher Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text Two

Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
31 (52%)	2 (3%)	7 (12%)	20 (33%)	60

As shown in Table 6, T2 asked 31 (52%) Retrieval of Information questions during Text Two. A Retrieval of Information question requires low-level cognitive function since the information is found directly in the text. T2 asked students, “What year did FDR give this speech?” Students could find that information at the top of the page, and a student appropriately responded, “1941.” This information was found in the first paragraph of the text making it clearly a Retrieval of Information question.

The second category, Construction of Message, was the lowest number of questions asked by T2, which totaled two (3%) questions. At the conclusion of the lesson T2 asked students to make an inference based on the information learned from the text and their own experience. T2 asked, “1941 and 2005, are the issues we are dealing with the same?” Students replied, “Yes.” T2 did not extend the discussion at this time.

T2 asked seven (12%) Extension of Discussion questions. An example of such a question occurred at the beginning of the lesson prior to reading the text. The teacher was explaining that the President must give a State of the Union Address each January. T2 stated, “It is in the Constitution that he [President] must give a speech every year. The people have to know what is

going on in the country. What will happen?" A student responded, "People won't know." The teacher extends this discussion by asking, "What will you feel like?" A student responded, "Lost." Although T2 could have continued to extend the discussion, he stopped at that point and continued to explain the State of the Union Address to the class.

The final category, Checking for Knowledge, requires students to tap their background knowledge. T2 checked for knowledge a total of 20 (33%) times during Text Two. After reading the text T2 engaged students in a guided discussion of connecting and comparing content from the text to today's war in Iraq. During this exchange the teacher required students to connect what they knew about current events in Iraq. T2 asked, "Are the people [citizens of Iraq] free yet?" Students quickly responded, "No" and the discussion stopped. No extension of the discussion was implemented at that time.

### **Analysis of Baseline Lessons of Text Two**

Table 7 compares the type, frequency, and percentage of questions asked by T1 and T2 during Text Two. T1 asked 42 questions during the lesson and T2 asked a total of 60 questions.

Table 7

Teachers One (T1) and Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text Two Baseline Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
T1	22 (53%)	0 (0%)	6 (14%)	14 (33%)	42
T2	31 (52%)	2 (3%)	7 (12%)	20 (33%)	60

T1 and T2 both asked the highest percentage of questions in the Retrieval of Information category. T1 asked 22 (53%) and T2 asked 31 (52%). This high frequency and percentage of questions could be attributed to the fact that this text consisted of new information for many students. As social studies teachers, the teachers may have wanted to ensure that their students understood the basic concepts presented in the text. Both teachers commented in their journals that they wanted students to make present day connections to the war in Iraq although T1 did not ask any Construction of Message questions and six Extension of Discussion questions, and T2 asked two Construction of Message and seven Extension of Discussion questions, which indicates a misalignment with their instructional objectives and/or goals. This low number of Construction of Message questions asked by the teachers may not have allowed for students to make the appropriate connections, a goal of the lesson according to the teachers' reflective journals. T1 wrote, "Students were also asked to make present day connections to the text as far

as the war in Iraq, etc...” There was no evidence to support this statement. An inconsistency exists between learning objectives and implementation of lessons. T2 wrote, “Drawing comparisons between 1940’s Europe, and the current situation in Iraq, the four freedoms that FDR outlined are the same goals that G.W. has for the Iraqi people. I believe that my students did understand the comparison because they had the background knowledge of Hitler and the Nazi party.” This is supported by two questions specifically asked by T2. During the recitations T2 wrote *the four freedoms* on the chalkboard. This excerpt from the transcript illustrates the exchange.

Teacher (reads four freedoms from chalkboard): Why do those four things look familiar to you?

Student 1: Are they in the Declaration of Independence?

Teacher: Who abides by them?

Student 2: Us.

Teacher: People from the?

Student 3: United States.

Teacher: Speech and express yourself, this is the freedom of what?

Student 4: Speech.

Teacher: Reduction of weapons?

Student 5: Less violence.

Teacher: What is FDR trying to do?

Student 6: Trying to get them to go by the same rules as us.

Teacher: Let’s think about something. What conflict is going on now?

At this point the teacher led students to make a comparison of present day Iraq and the struggles of the United States during 1941. T2 did build on what students were saying in a refined, narrow manner. Ultimately the goal is to have teachers begin with an open-ended question and follow that by building on what students are trying to say. On the contrary, T1 and T2 both seemed to dominate the classroom discourse with a very specific, narrow goal or outcome in mind. Teacher talk dominated both teachers' lessons. As illustrated above, the teacher asked questions that required one-word answers. With appropriate training and open-ended questions, teachers could ask less but get more from their questions.

Both teachers reflected in their reflective teaching journals on the lesson immediately after it was taught. T1 wrote the following:

Students were able to identify and relate to the four freedoms outlined in the text. Students were also able to make personal justifications to the outlined freedoms. Students were then able to choose which of the four was most important to them and why. Students were asked to respond to the text in a way that they were to agree or disagree with FDR. Students were also asked to make present day connections to the text as far as the war in Iraq, etc...

T2 wrote the following immediately after teaching text two.

“The Four Freedoms” from FDR’s State of the Union Address in 1941 could have been taken and transposed into the 2004 State of the Union changing a few details, the world has not changed greatly over the past 65 years. The world faces many of the same issues and challenges, leaving leaders to face many of the same decisions. Drawing comparisons

between 1940's Europe, and the current situation in Iraq, the four freedoms that FDR outlined are the same goals that G.W. has for the Iraqi people. I believe that my students did understand the comparison because they had the background knowledge of Hitler and the Nazi party.

Table 8 signifies the teachers' questioning goals written in their reflective teaching journals for Text Two. This table also represents the students' engagement goals as identified by the teachers in those journals.

Table 8

Teachers One (T1) and Two (T2): Reflections on Text Two Baseline Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	identify information/ make personal and present day connections	identify factual information relate to text/ personal response to text
T2	make comparisons using background knowledge/comprehension	compare/retrieve factual information

T1 writes that she required students “to identify and relate to the four freedoms” that were found in the text. Additionally, students “were also able to make personal justifications to the outlined freedoms.” The task of making personal connections and supporting their justification cannot be found in the transcript. Analysis of the transcript indicates that students were not asked to construct meaning during the lesson. The misalignment of teachers' intended goals and actual instructional implementation is again apparent during this lesson. On the other hand, T2's goal was to support students' comprehension of text by tapping their prior

knowledge. This is clear from the transcripts and analysis. T2 asked 31 (52%) Retrieval of Information questions and 20 (33%) Checking for Knowledge questions. The high frequency and percentage does support his goal of comprehension of text although at the lower-level of cognitive function or basic textual recall.

### **3. Text Three: Baseline Lesson**

Text Three was entitled *A Response to Terror*. This specific text came from a supplemental source used entitled American History: The Early Years to 1877. This text was selected by teachers to introduce students to terrorism and its' extensive history in the United States with the potential for making modern day connections. The text is actually the speech John Sherman, United States Senator from Ohio, gave to Congress in 1871 about the threat of the Ku Klux Klan and other terrorist groups in the South. The participants thought that the text would shed light on modern day issues that students read and talk about in and out of school.

While teaching Text Three, T1 asked a total of 66 questions. Table 9 categorizes the type, frequency, and percentage of questions according to the categories defined in Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996).

Table 9

Teacher One (T1): Type, Frequency (and Percentage) of Questions Asked During Text Three

Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
27 (41%)	5 (8%)	7 (10%)	27 (41%)	66

As shown in Table 9, T1 asked 27 (41%) Retrieval of Information and Checking for Knowledge questions. An example of a Retrieval of Information question asked during the lesson was, “In passage four what was the goal of the KKK?” A student responded, “Take away their [blacks] rights.” The teacher provided feedback to the student indicating he was correct. This information was stated directly in the text.

The teacher asked 27 (41%) Checking for Knowledge questions. An example of a Checking for Knowledge question asked during the lesson was, “Tell me what you know about the KKK.” Students quickly responded with statements such as, “They hate blacks,” “They hate Christians,” “They are like Hitler.” This question clearly required students to tap their background knowledge and bring this information to the discussion.

The two categories that ranked lowest in number of type, frequency and percentage were Construction of Message and Extension of Discussion. T1 asked five (8%) Construction of Message questions during the lesson. One such question took place during a discussion of the goals of the KKK. A student responded that one of the goals of the KKK was to take away African Americans’ freedoms. The teacher asked the student to explain what type of freedom she



was referring to and the student answered, “The freedom to vote.” The teacher asked the student to think about whether their goal was one of military power or political power. The student responded that the KKK’s goal was one of political power. The teacher asked the student to explain how this was so. The student inferred from the text then stated, “Taking someone’s rights away is more political because it gives them the control of their minds.” No extension of the discussed occurred at that time.

The fourth category, Extension of Discussion, requires the teacher to build upon a student’s response and continue the dialogue. T1 asked seven (10%) Extension of Discussion questions during the lesson. The following is an example from the transcribed lesson that illustrates this exchange.

Teacher: They [KKK] hate African American and they also hate Catholics, why?

Student 1: Because they are not into it.

Teacher: What?

Student 1: They are not into that stuff.

Teacher: What stuff? They also hate people from South Eastern Europe? Why?

This is a region, southeastern region. How can they have all these different ways to hate?

Student 2: So they don’t have to change.

Teacher: What do you mean?

Student 3: They want everyone to be like them.

In this example, the teacher continues to prompt and probe students to continue to think about the topic and elaborate or add to what a classmate said. Three different students were engaged in this exchange.

While teaching Text Three, T2 asked a total of 30 questions. Table 10 indicates the type, frequency, and percentage of questions asked during the lesson.

Table 10

Teacher Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text Three  
Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
20 (67%)	0 (0%)	1 (3%)	9 (30%)	30

T2 asked 20 (67%) Retrieval of Information questions while teaching Text Three. Unlike T1, T2 did not ask students to discuss what they knew about the topic (Ku Klux Klan) prior to reading the text. The teacher began by asking students to answer the question, “What is the Ku Klux Klan?” which was written in the text box at the top of the page. This example of Retrieval of Information question is similar to many of the questions asked during the lesson.

T2 asked nine (30%) Checking for Knowledge questions and one (3%) Extension of Discussion question while discussing terrorists. He was making the connection of Alqueda to the KKK. The teacher asked, “Who are on airplanes now?” This was an example of a Checking for Knowledge question since it required students to use their background knowledge to answer the question. A student responded, “Air marshals.” The teacher then extended the discussion by asking students, “Why?” Another student answered, “To stop them [terrorists].” That was the end of the exchange, this would have been a perfect opportunity to continue to extend the

discussion and relate the term *terrorism* in a broader sense of the word. A discussion of the word *terror* may have very well helped students understand that the mission of the terrorists is to instill terror in their victims.

### **Analysis of Baseline Lessons of Text Three**

Table 11 compares the type, frequency, and percentage of questions asked by T1 and T2 during the Text Three lesson. T1 asked significantly more questions than T2 during the lesson.

Table 11

Teachers One (T1) and Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text Three Baseline Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
T1	27 (41%)	5 (8%)	7 (10%)	27 (41%)	66
T2	20 (67%)	0 (0%)	1 (3%)	9 (30%)	30

Table 11 confirms that T1 asked more than double the questions that T2 asked during the lesson. Both Retrieval of Information and Checking for Knowledge categories are comprised of 27 (41%) questions asked by T1. T2 also asked more Retrieval of Information and Checking for Knowledge questions although the frequency and percentages are much lower. T2 asked 20 (67%) Retrieval of Information questions and nine (30%) Checking for Knowledge questions. A

small percentage of questions asked by both teachers are present in the Construction of Message and Extension of Discussion categories.

The most interesting and revealing information comes from the reflective teaching journals of the teachers. T2 writes, “We discussed how each group gets its message out” referring to modern day and Civil War period terrorists groups. Based on the transcribed lesson, a discussion did not take place. The class consisted of a question and answer session in the purest form. Students were asked to make personal connections only nine times (30%). This evidence suggests that T2 did not feel comfortable dealing strictly with the subject matter of the KKK. The majority of his questions were Retrieval of Information questions, which requires students to gather information only from the text. When a student did answer correctly in reference to the KKK, it would be the ideal time to extend the discussion, which he only did once during the 45-minute class period. He did not ask students any Construction of Message questions leading the investigator to speculate that he either did not have the knowledge to lead a discussion or he did not feel comfortable doing so although his reflective teaching journal did not indicate such.

T1, on the other hand, seemed to feel quite comfortable in her presentation of this sensitive material. Although she could have extended the discussion further on many occasions during the lesson, overall, she presented the material in a straightforward, honest manner, giving students the facts presented in the text. She led a guided discussion without interjecting opinion. T1 asked 27 (41%) Checking for Knowledge questions that required students to use their background knowledge to make meaning. This seemed to aid the students in creating textual meaning by making personal connections from previous experiences and background knowledge. Since students were so open and willing to share their experiences in relation to race issues, the number of Checking for Knowledge questions may have been just as important as

Retrieval of Information questions for this particular lesson, unlike previous lessons taught by the teacher.

Although T1 seemed more comfortable with the subject matter, there was one instance, in particular, that indicates resistance on her part. T1 asked students, “What do you know about the KKK?” Several students responded, “They hate black,” “They hate Christians,” “They are like Hitler.” At that time the teacher did not ask any students to elaborate or explain their answer. The investigator speculates reluctance on the part of the teacher because she is Caucasian and the majority of her class consists of African American students.

T1 wrote the following in her reflective journal:

Students expressed great ability to draw on prior knowledge to make personal connections to the text. The text prompted great discussion on terror as a means of control. Students were unable to stay focused on the purpose of the passage. They could not give or make reference to Sherman’s attempts of persuasion. However, they were interested in the origin of the KKK, rooted in post Civil War. Students were also interested in finding out where these hate groups are and why. Although they lost focus they were inquisitive and attentive.

T2 wrote the following in his reflective journal:

In “A Response to Terror” the class was attempting to find a relevant current example to compare to the KKK. Our class used AlQueda and traced it to the KKK. We discussed how each group gets its message out. Each uses terror, look to only punish certain groups and use the same hit-and-run tactics. Also, we compared how the U.S. government has chosen to handle each of the terror groups. The U.S. government remained

quiet in response to the KKK, while this administration has feverishly pursued the leaders of AlQueda. Strong conclusions and mastery of the subject matter was made by the class.

Table 12 indicates the teachers' questioning and student engagement goals for Text Three. Based on the teachers' reflective teaching journals and analysis of lessons, a misalignment occurred.

Table 12

Teachers One (T1) and Two (T2): Reflections on Text Three Baseline Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	personal connections/ comprehension	tap prior knowledge/ factual recall
T2	make modern day connections/ comprehension	discussion/ make comparisons/ retrieve factual information

T1 states in her reflective teaching journal that “Students expressed great ability to draw on prior knowledge to make personal connections to the text.” This would account for the high number of Checking for Knowledge questions asked during the lesson. She adds, “The text prompted great discussion on terror as a means of control.” Although T1 states that there was “great discussion” in the classroom she extended that discussion only seven times during the lesson. This indicates that discussion did not occur but more of a recitation. Similarly, T2 writes, “We discussed how each group [terror groups] gets its message out.” The analysis of the lesson indicates that T2 extended the discussion only once and did not ask students any Construction of Message questions during the lesson. It seems that the main instructional objective was for

students to retrieve factual information rather than construct meaning, make comparisons, or connect to modern day experiences as stated in his reflective teaching journal.

**4. Text Four: Baseline Lesson**

Text Four entitled *The Scapegoats*, is a one page reading related to World War II and The Holocaust. The first half of the text is a letter written from the perspective of a concentration camp survivor, Rebekah. She is writing the letter to her family members who may or may not be alive. The second half of the text is a three- paragraph summary of Hitler and his use of the Jews as scapegoats for all of Germany’s problems. This text served as supplemental material to the previous information students learned about WWII.

T1 asked a total of 64 questions during this particular lesson. Table 13 indicates the type, frequency and percentage of questions asked based on Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996).

Table 13

Teacher One (T1): Type, Frequency (and Percentage) of Questions Asked During Text Four Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
14 (22%)	3 (4%)	7 (11%)	40 (63%)	64

As indicated in Table 13, T1 asked 14 (22%) Retrieval of Information questions during the lesson of Text Four. An example of a Retrieval of Information question asked by T1 was, “What is the date that this letter was written?” Students retrieved this information from the top of the page and answered, “1943.” Five additional questions followed that were the same type of question simply asking students to state information directly from the text.

The second category, Construction of Message, requires students to make connections and draw inferences based on the text. T1 asked three (4%) Construction of Message questions during this lesson. The teacher asked the students, “Why does she [Rebekah] want one person to survive?” The teacher asked this question after reading the letter written by Rebekah where she writes, “Please, Rachel, run if you still have the opportunity. I could not bear it if they took you too. At least one member of our family must survive.” Based on that portion of the text, the teacher asked students to make a connection, or infer, why she wrote that particular line in the letter. A student responded, “They [the surviving family member] could tell people what they [the Nazi’s] are doing to them.” A second student immediately added, “If your whole family goes to war, they all die.” T1 followed up by asking another Construction of Message question. She asked, “What happens to the family name?” This too required students to make the connection that if all family members die, so too does the family name. A student answered, “There will be no more name.” A second student added, “If one of them [a family member] is still alive, they can make more family members.” T1 lead students successfully to making connections within the text.

The third category, Extension of Discussion, totaled seven (11%) questions asked during this lesson. The class was discussing the term *vermin* since it was referred to in the text. T1 asked, “How did he [Hitler] eliminate his *vermin*?” A student replied, “Killed them, made them



go to camps, made them go crazy.” The teacher extended the discussion by asking students, “How did he do this?” The same student responded, “Gas.” The teacher moved on with another question not asking for an explanation or further extension of the discussion.

The final category, Checking for Knowledge, requires students to tap their background knowledge in order to make connections within the text. T1 asked 40 (63%) questions in this category, the highest percentage of questions asked. Throughout the lesson, the teacher continuously checked students’ content knowledge. An example of such a question was, “Why is Hitler torturing the Jews?” The answer to this question is not in the text but can be found in the students’ knowledge of the content. One student responded, “He hates them.” No additional students were probed or prompted to participate.

T2 asked 27 questions while teaching Text Four. Table 14 indicates the type, frequency, and percentage of questions asked by T2.

Table 14

Teacher Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text Four Baseline Lesson

Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
16 (59%)	3 (11%)	1 (4%)	7 (26%)	27

As indicated in Table 14, T2 asked 16 (59%) Retrieval of Information questions during the lesson of Text Four. The teacher asked, “Hitler called her [Rebekah] a what?” A student responded, “Vermin,” which was stated in the text. No discussion of the term occurred.

The second category, Construction of Message, consisted of three (11%) questions asked by the teacher. An example of this type of question asked by the teacher was, “Why would these people [Jews] be hiding?” The teacher was requiring students to make an inference based on both the information in the text and previously learned information. A student stated, “So the Germans wouldn’t catch them and put them in a concentration camp.” The student then continued to read the text aloud to the class.

The third category, Extension of Discussion, was utilized one time (4%) during this lesson. The text states, “People leave and don’t return.” The teacher repeated the text and asked, “What does that mean?” A student responded, “Oh, they are killed.” The teacher then prompted, “Tell me more about that.” This illustrates the teacher extending the discussion to develop a picture of what happens to enhance students’ understanding of the circumstances.

The final category, Checking for Knowledge, consisted of seven (26%) questions asked by the teacher. The first four questions of the lesson required students to tap their background knowledge to answer the questions. The following excerpt comes from the transcribed lesson:

Teacher: Who is Adolf Hitler?

Student 1: Leader of the German Army.

Teacher: What war did he start?

Student1: World War II.

Teacher: Why did he start it?

Student 2: He hates everyone.

Student 3: He hates Jews the most.

Student 4: He invaded the Jewish land and he executed and put people in concentration camps.

Teacher: What is a concentration camp?

Student 3: A place where he put people to torture them until they died.

This transcription illustrates the types of questions asked by the teacher at the beginning of the lesson that required students to use previously learned material to understand the text they were about to read. By tapping students' schema, the teacher could set a purpose for reading the text by making connections between old and new content knowledge.

Table 15 compares the type, frequency, and percentage of questions asked by T1 and T2 during the lesson of Text Four. T1 asked significantly more questions than T2 during this lesson.

Table 15

Teachers One (T1) and Two (T2): Type, Frequency (and Percentage) of Questions Asked During Text Four Baseline Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
T1	14 (22%)	3 (4%)	7 (11%)	40 (63%)	64
T2	16 (59%)	3 (11%)	1 (4%)	7 (26%)	27

It is clear that each teacher had dissimilar instructional objectives based on the types of questions asked. T1 asked 40 (63%) Checking for Knowledge questions which may be attributed to the type of text read. Since the text was about Germany and the Holocaust, the teacher may have wanted to ensure students possessed the appropriate background knowledge prior to reading the text. On the contrary, T2 asked 16 (59%) Retrieval of Information questions. Unlike T1, T2's instructional objective may have been to ensure students clearly understood the text as it was read. Noteworthy, is the considerable difference in the number of questions asked. T1 asked a total of 64 questions whereas T2 asked 27 questions. This discrepancy may exist based on the students' grade level. T1 teaches eighth grade, and WWII is taught at the end of seventh grade and continued at the beginning of eighth grade. T1 may have felt confident that students possessed adequate background knowledge to deal with this text successfully. This explanation could account for the high percentage of Checking for Knowledge questions asked by T1.

#### **Analysis of Baseline Lessons of Text Four**

The difference in the frequency and percentage of questions asked by the teachers during the Text Four lessons is quite revealing. T1 asked a total of 64 questions with 40 of those questions in the Checking for Knowledge category. T1 wrote in her reflective teaching journal, "Students provided sufficient background knowledge enabling them to make personal connections with the text." The transcript of the lesson reveals that T1 wanted students to make connections to the text based on previously learned material about WWII since she asked such a large number of questions in this category. With this in mind, it would have been an idyllic time to extend the discussion in the classroom using this supplemental text as a means to expand upon their already well-established repertoire of WWII. On the contrary, T1 asked three (4%) Construction of Message questions and seven (11%) Extension of Discussion questions, which did not prompt

students to elaborate on their answers. On several occasions, the classroom discourse, dominated by the teacher, could have been prolonged and extended to allow for additional learning to transpire. This was not the case either due to lack of time or other management issues; the investigator is unclear as to the motive for stopping the flow of dialogue.

Unlike T1, the number of questions asked by T2 was comparably much lower. T2 asked a total of 27 questions during the Text Four lesson. The highest number of questions, Retrieval of Information, only required students to reiterate information found directly in the text. T2 asked one Retrieval of Information question after another neither stopping to make meaning from the text nor clarifying or discussing what was read in the text. T2 wrote in his reflective teaching journal, “A strong level of background knowledge led to an excellent class discussion on how difficult it must have been to write a letter from a concentration camp,” making the assertion a discussion took place in the classroom. The discourse in the classroom could be categorized more as a recitation than a discussion.

The large discrepancy in the number of questions asked by both teachers is surprising given the topic. Clearly, one would assume that if students did have the sufficient background knowledge needed to make meaning from this text, a comprehensive, in-depth discussion would ensue during the course of the lesson. This was clearly not the case. T1 may have felt obliged to check for understanding hence asking a large number of Checking for Knowledge questions. T2 may not have felt the need to check his students’ knowledge in order to initiate the lesson or assess previous learning. This illustrates the difference between teachers’ instructional goals and objectives.

After teaching the lesson teachers reflected on the experience in their reflective teaching journal. T1 wrote the following:

Students provided sufficient background knowledge enabling them to make personal connections with the text. They were attentive and focused. Students were able to successfully retell the main idea of the passage while also able to give personal examples of how they themselves could be scapegoated. The subject of discrimination and forms of discrimination did not come to fruition as I had anticipated.

T2 wrote the following:

A strong level of background knowledge led to an excellent class discussion on how difficult it must have been to write a letter from a concentration camp. What that girl must have felt writing her sister, while watching other Jews dying on a daily basis. We were trying to explain what a scapegoat was and how our students may have been scapegoats at one point in their lives. Once the students understood that they too have been scapegoats, it allowed them to connect on a different level with Rebekah.

Table 16 indicates the teachers' questioning and student engagement goals for Text Four. Based on the teachers' reflective teaching journals and analysis of lessons, a misalignment occurred.

Table 16

Teachers One (T1) and Two (T2): Reflections on Text Four Baseline Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	personal connections/ retell	tap prior knowledge/ factual recall
T2	personal connections/ comprehension	tap prior knowledge/ retrieve factual information

T1’s questioning goals to correlates with her reflective teaching journal to some degree. She writes “Students provided sufficient background knowledge enabling them to make personal connections with the text.” T1 asked 40 Checking for Knowledge questions during the lesson illustrating that students were tapping their prior knowledge to connect with the text on some level, although she only asked three Construction of Message questions making it difficult to imagine that she was involving students in making meaningful personal connections. Without asking a significant number of Construction of Message or Extension of Discussion questions it is difficult to imagine much engagement with the text.

T2 asked one Extension of Discussion question but writes, “A strong level of background knowledge led to an excellent class discussion on how difficult it must have been to write a letter from a concentration camp.” Envisioning a class discussion occurring with no extension of discussion taking place is quite difficult. At the same time a truly engaging discussion would require the teacher to initiate a number of Construction of Message questions. T2 asked three Construction of Message questions during the lesson of Text Four.

### Baseline Data Analysis

Figure 2 depicts the type and percentage of questions asked by T1 during the baseline lessons. It is evident from Figure 2 that Retrieval of Information and Checking for Knowledge questions ranked highest in percentages. Likewise, Figure 3 represents the type and percentage of questions asked by T2 during the baseline lessons. This figure also confirms that Retrieval of Information and Checking for Knowledge questions ranked the highest.

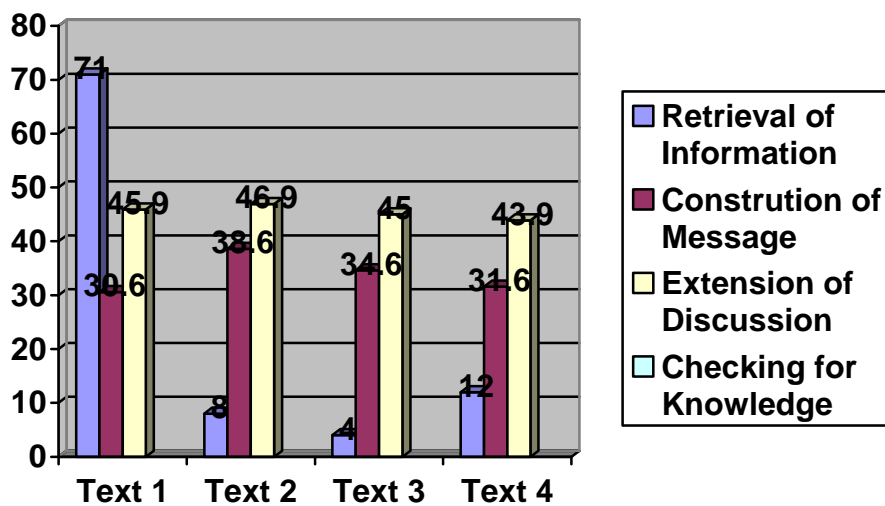


Figure 2. Teacher 1: Type (and Percentage) of Questions Asked During Baseline Lessons



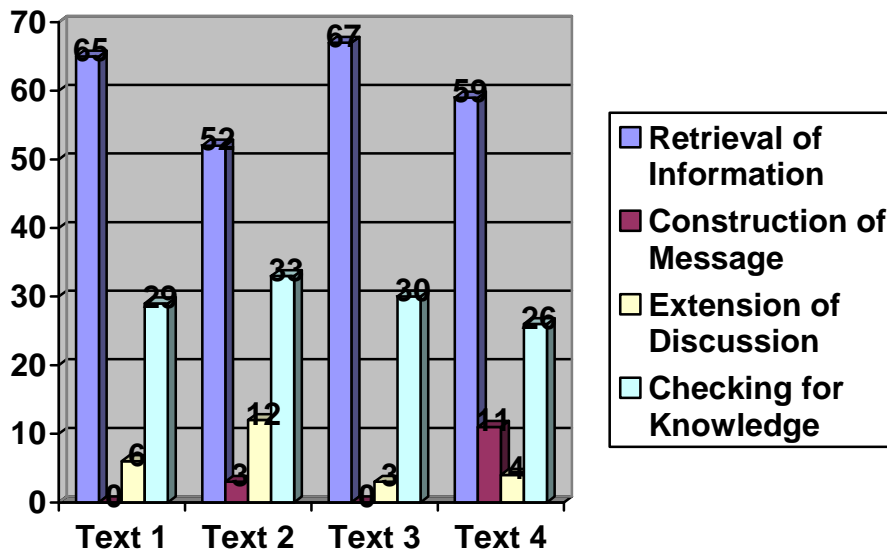


Figure 3. Teacher 2: Type (and Percentage) of Questions Asked During Baseline Lessons

From the high percentage of Retrieval of Information and Checking for Knowledge questions asked by both teachers in all four baseline lessons, a theme emerges; teacher talk dominates both of these middle school social studies classrooms. That is to say the teachers dominate the airtime in the classroom and direct the flow of information. Questions asked were done so in an orderly fashion, one after the other, very quickly, to be answered immediately by students with minimal teacher wait time. A large number of answers provided by students were one-word answers with no opportunity for explanation or extension by those students. Student questions were minimal, consisting on average one per lesson per teacher related to the content. If a student did not understand the text or found an inconsistency within the text, there was no evidence or indication of such from students. Information gathered from interviews and observations illustrates both teachers control the conversation in the classroom and feel obligated to do so. Interestingly, it is clear that the teachers felt that for the most part students were making

meaning from that text if led appropriately through the text based on their reflective teaching journal entries. This leading comes in the form of a recitation that is quick, rapid and narrow in scope. There is little time to allow students “the ability to build meaning from the text and to monitor that meaning-building” (Beck, McKeown, Sandora, & Kucan, 1996, p. 391). Little or no modeling or thinking aloud by teachers was implemented.

The baseline lessons typify the patterns observed in lessons taught by both teachers. The teacher asked a question and students answered in a question/answer format, and the teacher usually acknowledged that response and asked the next question. Very rarely was there a connection between responses from one student to the next. Each question and answer segment was treated almost as its own entity. For many of these exchanges you could take it out of the transcript and the meaning would still be intact. For example T2 asked, “What is a concentration camp?” during Text Four lesson. This question and answer could be taken out of the equation and the flow of the lesson would not change. No culmination or discussion took place in the context of the lessons.

After each baseline lesson, the teachers implemented a strategy or assignment following the text. For example, KWL charts, Spider Webs, highlighting while reading, and concept maps were used either during or after the lessons. As noted by Beck, McKeown, Sandora, Kucan, and Worthy (1996), “Some investigators have questioned the necessity of emphasizing specific strategies if the goal of reading as an active search for meaning could be kept in mind” (p. 386). In other words, it may be pertinent to emphasize that meaning making/comprehension is and should be the ultimate goal of reading. This does not always require students to complete a graph, chart or other graphic organizer, which may overshadow the goal of reading. Furthermore, requiring students to complete a worksheet either during or after reading could have the potential

to easily distract both struggling and fluent readers alike. For a student who finds multi-tasking a challenge the worksheet could possibly interfere with meaning making.

Table 17 summarizes the teachers’ questioning and student engagement goals for the baseline lessons. The information was obtained from the teachers’ reflective teaching journals.

Table 17  
Teachers One (T1) and Two (T2): Reflections on Baseline Lessons

<b>Participants</b>	<b>Teacher Questioning Goal(s)</b>	<b>Student Engagement Goal(s)</b>
Teacher 1		
Text One	clarification/ comprehension	retrieve factual information from text
Text Two	identify information/ make personal and present day connections	identify factual information from text/ personal response to text
Text Three	personal connections/ comprehension	tap prior knowledge/ factual recall
Text Four	personal connections/ retell	tap prior knowledge/ factual recall
Teacher 2		
Text One	comparison/ comprehension	draw conclusions/ retrieve factual information
Text Two	make comparisons using background knowledge/ comprehension	compare/retrieve factual information
Text Three	make modern day connections/comprehension	discussion/make comparisons/retrieve factual information
Text Four	personal connections/comprehension	tap prior knowledge/retrieve factual information

Based on the information presented in Table 17, the questioning goals of the teachers are not adequately aligned with the goals teachers planned for students. T1 writes that the students' engagement goals for all four texts were factual recall or retrieve/identify information found in the text. Similarly, T2 also wanted students to retrieve factual information from the text. T2 mentions that his questioning goals include comprehension for all four texts. One could argue that comprehension of factual information occurred, but levels of engagement with those texts are minimal at best.

### **C. Intervention Staff Development**

After the baseline lessons were taught, transcribed, coded and analyzed the investigator implemented a staff development based on Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). The teachers met with the investigator for six hours to participate in the intervention staff development developed by the investigator and based on Beck et al. (1996). The Staff Development Outline details each component of the four- phase program (Appendix I).

Phase 1: Rationale/Theory consisted of two sections; the first section was collaborative discussion about the motivation of teachers in their use of questions used in each of the classrooms and the need for training to improve questioning strategies. Teachers were eager to share their rationales as to why their questioning could and should be improved in their respective classrooms. The most important tool utilized by both teachers is the question. By improving their use of the question, the effects could be phenomenal. On the other hand, both teachers indicated that they used the discussion method most often in their classrooms. This was not the case and a dialogue ensued about this element or component of each of the classrooms. The second section of Phase I included viewing a video taped lesson where teachers were asked

to chart the types of questions asked during that particular lesson based on the questioning schemes of QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). Before viewing the video taped lesson, the investigator reviewed example *Queries* and modeled for participants how to categorize Queries (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). The investigator reviewed the categories with the participants and examples were provided. Since teachers were required to read an article entitled *Questioning the Author: Making sense of social studies* written by Beck and McKeown (2002) prior to training to familiarize them with the process, the teachers were quite adept in their knowledge. This indicated to the investigator the dedication of each teacher to the process. Their commitment made the success of the training possible. The teachers asked relevant questions that served to clarify any misconceptions during this phase. That is to say that the teachers were highly involved in making this process successful. They wanted to learn the material to the best of their abilities so that their lessons were a success.

Phase 2: Demonstration/Guided Practice/Role-Playing was a three-hour training of Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) implementation. Teachers were required to prepare Queries for the four pre-selected texts, plan a lesson for a text not used in the study but taught in their classrooms earlier in the year, videotape themselves teaching the lesson and then reconvene and discuss the quality and quantity of teachers' Queries and students' responses. This phase was fundamental in the success of the training. Teachers worked collaboratively to create appropriate Queries for the texts. Then each teacher planned a separate lesson, one not used in the study, which would be videotaped. Again, the teachers worked as a team to create a lesson and

appropriate questions for the videotaped portion of the training. The lessons were taught in their respective classrooms and then we reconvened to view each lesson. While watching the videotaped lessons, each teacher took notes on their own performance as well as their colleague's performance. Each teacher was given a blank piece of paper and instructed to make two columns, one for positives and ones for negatives. This note taking proved to be extremely helpful in the reflective process. Teachers were able to effectively distinguish the types of Queries and observe a noticeable pattern among students' responses. Ultimately, students were talking more, teachers were talking less and the teachers were pleased with the outcome of this one lesson. Each lesson took thirty minutes per teacher and the reflective discussion lasted approximately two and a half hours. The investigator asked the participants to first share their positives of each lesson. Once these were discussed, teachers were then asked to discuss the negatives. As a team, we brainstormed ways in which these potential instructional obstacles could be avoided in future lessons. Teachers were eager to share their success with each other and their colleagues.

Phase 3: Debriefing/Reflection required teachers to reflect on the outcomes of the training as it pertained to their questioning behaviors. This was accomplished through reflective discourse with the investigator and one another. At the end of the training the investigator believed it was imperative to have the teachers reflect on the training experience. This reflection/debriefing allowed teachers to ask additional questions or raise concerns they had before the second half the study evolved. Teachers were pleased with the results of the videotaped lesson and were enthusiastic to begin the process. The investigator asked each teacher to reflect on the quality and quantity of the students' responses as well as their questioning strategies. Each teacher shared their delight with the process thus far and was surprised by the

limited number of questions they asked during the lesson. They commented that the students were responding positively to the strategy as evidenced by the number of students who asked questions during the lessons.

Phase 4: Coaching is an on-going component of the program that requires each teacher to designate a colleague to whom they will train using QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). Each teacher committed to training a colleague. The teachers did ask for additional training to accomplish this if they felt it was necessary at the end of the study. The investigator agreed to support them during this process.

The total time devoted to the intervention staff development was approximately six hours although time outside of school was used. This additional time was not documented in any way since it was strictly voluntary.

The staff development was completed in two days that were solely devoted to training the participants. Since the participant was a former employee of the district, a good working relationship existed between the participants and investigator. Each participant was pleased to take part in the experience. They were active, connected and engaged in the process. Both were eager to improve their instructional implementation. Both teachers used questions as their main instructional tool and realized the necessity of improving in their area. Since questions were a key component of their classrooms, they believed that this improvement could have immense rewards for themselves and their students.

#### **D. Post Intervention: Questioning the Author Lessons**

T1 and T2 taught the same four pre-selected texts to their students after the intervention staff development was implemented using the strategies learned from Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). Each lesson was audio taped, transcribed and coded using the observational tool based on the work of Beck et al., (1996; 1997). Each Query was categorized as either Retrieval of Information, Construction of Message, Extension of Discussion, or Checking for Knowledge. Any questions that were rhetorical or procedural in nature were excluded from the analysis.

Questioning the Author (QtA) (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) is designed to shift the mindset of teachers from traditionally engaging in question/answer sessions toward posing *Queries* that serve to “bring about a productive learning environment” (Beck, McKeown, Sandora, & Kucan, 1996, p. 394). QtA encompasses four distinct features:

- (a) It addresses text as the product of a fallible author;
- (b) it deals with text through general probes for meaning directed toward making sense of ideas in the text;
- (c) it takes place in the context of reading as it initially occurs;
- (d) it encourages collaboration in the Construction of Message (Beck et al., 1996, p. 387).

Engagement Queries serve as a means to support teachers and students as they explore ideas contrary to the typical purpose of a question, which is to check students’ recall of text/information. “The goal of Queries is to prompt students to consider meaning and develop ideas rather than to retrieve information and state ideas” (Beck, McKeown, Hamilton, & Kucan, 1997, p. 7) Queries are open-ended and used as the text is read, “on-line” requiring teachers to



prepare, in advance, their strategy to intervene while reading. In addition, Queries are centered on the author's purpose for writing. Sometimes follow-up or Engagement Queries could not be planned in advance; the teacher and students would simply react to statements in the midst of discussion. This required the teachers to be "on their toes" while encouraging discourse in the classroom. Ultimately, the goal of reading is comprehension and being able to understand the purpose of the text and explain that text while connecting to previously learned information. Finally, teachers ultimately want students to be able to use the information learned in the text beyond the classroom by applying what is learned in other contexts and across content areas.

Two types of Engagement Queries are used in a Questioning the Author (QtA) lesson; Initiating Query and Focusing Query. An Initiating Query is the query used to help begin the discussion of a text while a Focusing Query provides guidance for extending or advancing that discussion. The goal of Engagement Queries is to give teachers the tools to "shift from retrieving information to constructing meaning, particularly extending the Construction of Message" (Beck, McKeown, Sandora, & Kucan, 1996, p. 395).

### **1. Text One: Questioning the Author (QtA) Lesson**

T1 taught Text One entitled *Carrie Chapman Catt* using strategies learned from QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). T1 asked a total of 49 Queries during the lesson. Table 18 compares the type, frequency, and percentage of questions/Queries asked during this baseline and QtA lesson. This number is significantly lower than the baseline lesson where he asked 72 total questions.

Table 18

Teacher One (T1): Type, Frequency (and Percentage) of Questions/Queries Asked During Text One Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions Asked
Baseline lesson of Text One	51 (71%)	6 (8%)	3 (4%)	12 (17%)	72
Questioning the Author lesson of Text One	7 (14%)	13 (27%)	12 (24%)	17 (35%)	49

T1 asked seven (14%) Retrieval of Information Queries during the QtA lesson. This is a significant decrease from the baseline lesson when T1 asked a total of 51 (71%) Retrieval of Information questions: a difference of 44 (57%) Queries/questions. Since QtA emphasizes the quality of responses as opposed to the quantity of responses, it is important to note that the number had decreased significantly in this specific category. T1 asked Retrieval of Information Queries that was necessary for comprehension of the text. An example of one such Query was, “The whole Movement is for what?” A student responded appropriately, “For women to vote.” This knowledge was embedded in a discussion of Carrie Chapman Catt’s fight for women to vote during this time. This question also helped to clarify what the term *movement* meant.

T1 asked 13 (27%) Construction of Message Queries during the QtA lesson of Text One. In the baseline lesson T1 asked six (8%) questions of the same type. By planning Queries for the text, it required the teacher to think through her questioning prior to teaching which allowed for more meaning making to take place during the reading of the text. Queries that were planned included; What is the author's message? and What is the author trying to say? These types of Queries, posed in the context of reading, can be categorized as Construction of Message. It is noteworthy that students who participated in this lesson began to develop and explain their ideas gained from the text. "Students engaged in shared investigation of meaning, not just shared retrieval of information and beliefs, so participation tends to be active" (Beck, McKeown, Hamilton, Kucan, 1997, p. 870). This type of active participation was beginning to emerge.

The third category, Extension of Discussion, yielded 12 (24%) Queries during the QtA lesson however only three (4%) Extension of Discussion questions was asked during the baseline lesson. During the QtA lesson, T1 was aware of the need to continue the discussion without stopping, unlike a gatekeeper of information, which was apparent during the baseline lesson. The teacher had not planned all Queries and understood the importance of extending the discourse. These discussion moves "are actions that teachers take to orchestrating students' ideas and making improvisational decisions" (Beck, McKeown, Hamilton, Kucan, 1997)

This newly implemented strategy permitted students to speak to one another, becoming part of the conversation and not relying so heavily on teacher dominated talk. Oddly enough, it became apparent that the teacher became part of the conversation not the dictator of it. The role of the teacher changed, opening the lines of student-to-student and student-to-teacher communication.

The fourth category, Checking for Knowledge, produced a higher number of Queries in the QtA lesson. Seventeen (35%) Queries were posed during the QtA lesson and 12 (17%) prior to the intervention. During the QtA lesson, T1 felt there were important connections that were not made during the baseline lesson. For example, the top of the page the text reads, “The world taught women nothing skillful and then said her work was worthless.” T1 asked, “What World? What is happening in the world at this time?” She probed, “What do we know about women before 1947?” This is a Query that is vital for students to think about in order to make sense of the text. A student answered, “They stayed around the house.” Another student quickly added, “They had no rights or hardly any.” This Checking for Knowledge Query illustrates how important it is for students to make connections to previous learning in order to comprehend a text. Similarly, this Query served to extend the discussion while giving students a deeper sense of the world and the struggle of women.

It is worth noting the number of Queries/questions asked by both the teacher and students during the baseline and post intervention lessons. During the baseline lesson, T1 asked a total of 72 questions while 49 Queries were asked in the QtA lesson. By sheer numbers alone, it is clear that teacher talk decreased in the QtA lesson. Interestingly, student questions increased in the QtA lesson. Twelve students asked questions during the QtA lesson of Text One. Astonishingly, five of the questions were directed towards classmates not the teacher. This clearly illustrates the openness and sense of community present during the QtA lesson. The baseline lesson yielded two student questions, which were directed solely at the teacher. This could be attributed to the shift from simple recall of facts usually present in lessons to constructing meaning present in the QtA lessons. As students began to dissect the text and think critically about what the author was saying, they may have begun to process the information much more deeply than in a typical

question/answer session. The conversation that was not present previously became constructive and purposeful-the goal of the QtA strategy. Additionally, students may have felt more comfortable asking their own Queries/questions in this newly found dynamic atmosphere. Lastly, students seemed to like the idea that the author was fallible and capable of unclear ideas. Armed with this knowledge, students began to understand that their job was to “question” what the author wrote. It was now okay to do this, empowering many students.

T2 taught the text *Carrie Chapman Catt* using the QtA strategy. Table 19 compares the type, frequency, and percentage of Queries/questions asked during the baseline and QtA lessons. T2 asked a total of 39 Queries during the QtA lesson of Text One.

Table 19

Teacher Two (T2): Type, Frequency (and Percentage) of Queries/questions Asked During Text One Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Queries/questions Asked
Baseline lesson of Text One	47 (65%)	0 (0%)	4 (6%)	21 (29%)	72
Questioning the Author lesson of Text One	10 (26%)	14 (35%)	10 (26%)	5 (13%)	39

T2 asked ten (26%) Retrieval of Information Queries during the Questioning the Author (QtA) lesson. This indicates a significant decrease from the baseline lesson where T2 asked 47 (65%) questions of the same type. The teacher asked students, “What group was she [Carrie Chapman Catt] part of?” This information is stated directly in the text.

The second category, Construction of Message, consists of 14 (35%) Queries asked during the QtA lesson. The evidence suggests the teacher’s progress in supporting students as they made inferences from the text since T2 asked no questions in this category during the baseline lesson. During this lesson, T2 asked students, “What is a realist?” which would be a simple recall sentence if this were stated in the text. There is not a definition of the term, but he was requiring students to read the text surrounding the word to use the context. Unfortunately, there is no context so students have to dig deeper to make meaning. This requires students to make an inference. This Query also evoked discussion and collaboration among several students. One student responded, “It means real.” Another responded, “No to keep it real.” Another student added, “Someone who understands the way things are and should be.” Finally, without teacher intervention another student added, “So she should have been worried about women getting the right to vote, she understood it might not happen. She was real, she kept it real.” Although this question was not a Query in the true sense of how it is defined in QtA, it provided a springboard for discussion and elaboration of ideas among students. Additionally, no teacher intervention was needed to keep the dialogue flowing; a true testament to the environment that emerged after QtA was implemented.

The third category, Extension of Discussion, requires the teacher to build upon students’ responses to keep the dialogue flowing in the classroom. T2 extended the discussion ten (26%) times during this lesson. A discussion of the power of women during this time ensued. To focus

students while extending the discussion, T2 asked, “So, you say women became more powerful, how this applies to the topic at hand, Carrie Chapman Catt? A student responded, “She is the reason women got the right to vote.” Although this would be an opportunity to continue to extend the discussion, this was not the case.

The fourth category, Checking for Knowledge, included Queries that ask students to use their background knowledge or previous learning in order to answer the Query. T2 checked for knowledge five (13%) times during this lesson. The baseline lesson produced 21 (29%) of the same type of question. In the QtA lesson the teacher asked, “Where have you heard the word campaign before?” A student answered, “A goal, something you want, you have to campaign for it.” Another student added, “People who want to get elected have a campaign, like the President.” This example illustrates how students began to collaborate with one another to make meaning.

Overall, the number of Queries asked during the QtA lesson was significantly lower than the number of questions asked during the baseline lesson when the teacher asked a total of 72 questions. From the number of questions asked in the baseline lesson it is clear that little time is left for student interaction and engagement during the rapid-fire recitation. No student questions were asked during the baseline lesson, but five student-initiated Queries were asked during the QtA lesson.

Table 20 summarizes and compares the type, frequency, and percentage of Queries/questions asked during Text One Baseline and QtA lesson by T1 and T2. Overall, the frequency and percentage of questions/Queries asked by both teachers dropped significantly in the QtA lessons. T1 asked 72 questions in the baseline lesson and 49 Queries in the QtA lesson. Likewise, T2 asked 72 questions in the baseline lesson and 39 Queries in the QtA lesson.

Table 20

Summary of T1 and T2 Type, Frequency (and Percentage) of Questions/Queries Asked During Text One Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Queries/questions Asked
T1 Baseline lesson of Text One	51 (71%)	6 (8%)	3 (4%)	12 (17%)	72
T1 Questioning the Author lesson of Text One	7 (14%)	13 (27%)	12 (24%)	17 (35%)	49
T2 Baseline lesson of Text One	47 (65%)	0 (0%)	4 (6%)	21 (29%)	72
T2 Questioning the Author lesson of Text One	10 (26%)	14 (35%)	10 (26%)	5 (13%)	39

At first glance, it is abundantly clear that both T1 and T2 asked fewer Queries in the QtA lessons. A more important point to consider is the types of Queries asked during these lessons. Both teachers improved markedly in the Construction of Message and Extension of Discussion categories. Planning Queries prior to teaching each lesson helped to improve the types of Queries asked. T1 writes in her reflective teaching journal, “They [Students] referred and used the guided query questions as a means to identify a purpose for their reading.” By simply planning Queries, it gave the teacher a direction for discourse in the classroom and encouraged and enhanced student engagement with the text. T1 writes, “I am pleased with the students’ ability to



purposefully engage with the text.” She is pleased with students’ ability to comprehend, interact and process the text at higher levels than in previous lessons.

In like manner, T2 also displayed an increase in Construction of Message and Extension of Discussion Queries. In the baseline lesson of Text One, he initiated no Construction of Message and four Extension of Discussion questions. On the contrary, the Questioning the Author (QtA) lesson included 14 Construction of Message Queries and ten Extension of Discussion Queries. T2 writes, “They [Students] were also much more comfortable with the text because they had a chance to preview the guide questions.” Simply, giving students the support prior to reading helped them greatly.

### **Analysis of Questioning the Author Lesson of Text One**

Both teachers write revealing statements in their reflective teaching journals. T1 wrote, “They [students] referred and used the guided query questions as a means to identify a purpose for their reading.” Since the texts were taught at the eighth grade level, the teachers provided the planned Queries for students prior to reading. As stated, this in fact gave the students a purpose for reading. Since the classroom included many reluctant and struggling readers (defined by the teacher), it was decided to provide the students with the Queries prior to reading. Many students become anxious and withdrawn while reading aloud in class. They may fear either being called on to read by the teacher or answer a question related to the text, which can be a monumental task when a student is struggling with reading. This fear can force some students to give up and not attempt to tackle the text. The teachers’ thinking was to remove one obstacle for students so meaning making and engagement could successfully begin to evolve. T2 wrote, “I am pleased with the students’ ability to purposefully engage in [with] the text.” He added, “They were also much more comfortable with the text because they had the chance to preview the guide

questions.” Using the teachers’ reflective teaching journals and the data collected for Text One, a theme of engagement emerged.

During the baseline lesson, students seemed to simply read the text without much evidence of engagement, but during the QtA lessons students were actively involved in the text attempting to make meaning from the text. Student initiated Queries began to emerge in a way that was not present prior to the QtA training. The number of teacher questions decreased as the number of student questions increased. This trend clearly illustrates that students were actively engaged with and immersed in the text, and the students felt comfortable asking questions of their teachers and classmates. “From a QtA perspective, the teacher’s role involved participating in thinking and helping students develop ideas rather than managing thinking and explaining ideas. Student contributions involve collaborating with one another to construct ideas as they are encountered in the text rather than presenting ideas they have already constructed from a text” (Beck, McKeown, Hamilton, & Kucan, 1997, p. 77).

Furthermore, by providing students the Queries prior to reading may have served as a means of support for those students who struggle with reading. That is to say those reluctant readers, who do not strategically attack a text, may not have felt the frustration usually felt during reading an expository text.

After each teacher taught the QtA Text One lesson they reflected in their reflective teaching journal. T1 wrote the following:

Students were fully engaged and interacting with the text. They were able to employ and apply already practiced reading strategies. They referred and used the guided query questions as a means to identify a purpose for their reading. They recognized and understood the structure of the text in its sequential form. They

were able to make real world connections with the text and identify with the Women's Movement as a struggle for equality. They were able to analyze Catt's ability to succeed in positions that during that era were rare. They were able to analyze Catt's reasoning for amalgamating with those who shared her vision as a means to eliminate competition and gain strength in numbers.

Those who struggled with the text struggled with the multi-syllabic words. For future lessons time will need to be dedicated to the vocabulary in isolation so that they are better able to develop and apply morphological knowledge. They will need multiple opportunities and sources for the active learning of the vocabulary. In order to tackle readings of this complexity in the future, I will need to scaffold the text.

I am pleased with the students' ability to purposefully engage in the text. They have mastered certain reading strategies that enable them to comprehend and process the text. They are comfortable with self-monitoring their reading process and utilizing a multitude of fix up strategies. However, I need to develop better strategies for questioning that allow for them to internalize the text, to make it their own. In doing this they then are better able to create deeper background knowledge and concepts. Ultimately, I need to focus on taking the reading process a step further. In that I need to concentrate on their independent reading ability to manipulate and process expository text.

Teacher 2 wrote the following:

Students were asked to highlight the article about Carrie Chapman Catt.

They were to be highlighting with the intended purpose of completing a 5w's and 1h. The class looked at what Catt fought for and what life was like for women in the early 1900's. We focused on how women were viewed during that time period.

The "Quote/Unquote" at the top of the article helped us to understand how women were viewed. The class was unaware that these were not all that long ago and were surprised to learn of the struggles that faced women in this country.

Also, we discussed who exactly would have been against giving women the right to vote and for what reasons.

There was some difficult vocabulary in this article. Words such as; suffrage, ratification and campaign made easy concepts slightly more difficult to grasp.

Once we familiarized ourselves with these words, comprehension quickly followed. The class was able to complete the 5w and 1h assignment quite easily.

They were also much more comfortable with the text because they had the chance to preview the guide questions.

Table 21 identifies the questioning and student engagement goals of both teachers. These goals were analyzed and classified from the reflections written in the teachers' reflective journals.

Table 21

Teachers One (T1) and Two (T2): Reflections on Text One Questioning the Author Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	comprehension process/engage with text	personal connections/ analysis self-monitoring/question asking/
T2	comprehension identify unfamiliar vocabulary	personal connections/discussion question asking

It is apparent that the goals of the teachers differ greatly from the baseline and QtA lessons. In the baseline lessons, the primary goal of the teachers was for the students to comprehend what was written on the page without much cognitive input from students. Once the teachers were familiarized with the process of QtA, their goals changed dramatically as did the outcomes of students. T1 writes, “I am pleased with the students’ ability to purposefully engage with the text.” The evidence suggests that by using QtA students and teachers can work with texts on new levels. Additionally, T1 writes that “self-monitoring” is one of her student engagement goals. Given the QtA training, she expects more from students who she knows have the ability to succeed.

**2. Text Two: Questioning the Author (QtA) Lesson**

Text Two, *The Four Freedoms*, was taught using the strategies learned from QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). Table 22 compares the type, frequency, and percentage questions/ Queries asked during the baseline and QtA lesson taught by T1.

Table 22

Teacher One (T1): Type, Frequency (and Percentage) of Questions/Queries Asked During Text

Two Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions/Queries Asked
Baseline Lesson of Text Two	22 (53%)	0 (0%)	6 (14%)	14 (33%)	42
Questioning the Author Lesson of Text Two	5 (10%)	14 (27%)	16 (31%)	16 (31%)	51

As shown in Table 22, T1 asked five (10%) Retrieval of Information Queries while teaching the Questioning the Author (QtA) lesson of Text Two. Unlike the baseline lesson, T1 did not ask a Retrieval of Information Query until much later in the lesson of Text Two. She asked, “What do we want for the rest of the world in paragraph three?” The teacher was directing students to the answer while providing the answers’ location in the text. A student paraphrased, “No one should be poor.”

Next, T1 then asked a Construction of Message Query. She asked, “So what is our message?” Another student added, “Everyone should have our same freedoms.” This Construction of Message Query is one example from the 14 (27%) asked during the lesson. T1 required the students to infer based on the information learned in the text. During this lesson T2 asked 16 (31%) Extension of Discussion Queries compared to six (14%) in the baseline lesson. She more than doubled her ability to extend the discussion among students while teaching the text a second time. The following excerpt from the transcript illustrates T2 extending the discussion:

Teacher: What do you consider an essential freedom? What does essential mean?

Student 1: Must have it.

Teacher: Can there be an absolute answer?

Student 2: No

Teacher: Why not?

Student 1: Because everyone thinks differently.

Teacher: What is essential to you may not be essential to you; can you give me an example?

Student 3: I want religion and you want speech.

This excerpt illustrates the probing and prompting of students' thought process that was not present in the baseline lessons. The teacher served as a collaborator in thinking and building meaning (Beck, McKeown, Hamilton, & Kucan, 1997).

The fourth category, Checking for Knowledge, requires students to tap their prior learning/background knowledge. During the Questioning the Author (QtA) lesson, T1 asked 16 (31%) Queries and 14 (33%) questions in the baseline lesson.

T2 asked more Queries during the QtA lesson than in the baseline lesson for unknown reasons, but a shift in the types of questions vary from the baseline to the QtA lesson. Table 23 compares the type, frequency, and percentage of questions/Queries asked during both the baseline and QtA lesson. A shift from a large percentage of Retrieval of Information and Checking for Knowledge in the baseline lesson to Construction of Message and Extension of Discussion in the QtA lesson indicates the Queries were at a higher cognitive level.

Table 23

Teacher Two (T2): Type, Frequency (and Percentage) of Questions/Queries Asked During Text

Two Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions/Queries Asked
Baseline Lesson of Text Two	31 (52%)	2 (3%)	7 (12%)	20 (33%)	60
Questioning the Author Lesson of Text Two	12 (18%)	14 (22%)	23 (35%)	16 (25%)	65

As indicated in Table 23, T2 asked 12 (18%) Retrieval of Information Queries during the QtA lesson as opposed to the 31 (52%) questions asked during the baseline lesson. For a one page text, this would seem reasonable given it is a social studies text that is saturated with content information that the teacher may very well feel obliged to cover. A Retrieval of Information Query asked at the beginning of lesson was, "Who is in the picture?" This information was not in a caption under the picture, but in the subtitle of the text. This required students to look at the text and make a connection. Although categorized as Retrieval of Information, it did require students to preview the title and subtitle of the article, a valuable reading skill.

T2 asked 14 (22%) Construction of Message Queries during the lesson of Text Two, which is significantly more than the baseline lesson, where he asked two (3%). The teacher asked, "What is his [FDR] message?" A student responded, "It is about the war." The teacher asked a clarifying question, "What war?" The original Query, "What is his message?" required



students to process what was read thus far in the text and make an inference. This question would be a perfect means to extend the discussion although this was not the case.

The third category, Extension of Discussion, showed a significant increase as well. During the baseline lesson, T2 asked seven (12%) Extension of Discussion questions but asked 23 (35%) Queries during the Questioning the Author (QtA) lesson. This shows dramatic improvement in the ability of the teacher to build on students' responses. The following excerpt is an example of the teacher extending the discussion:

Teacher: Think about countries you are scared of?

Student 1: Iraq.

Teacher: Why?

Student 2: They are our enemy.

Teacher: Why would you be scared to go to Iraq?

Student 3: We are fighting them.

Teacher: Yes, there is fear.

This excerpt illustrates the teacher extending the discussion, but it also evidence of the teacher checking students' background knowledge. The teacher is "turning back" to students, requiring them to construct the idea. It would have been ideal to include other students in the discussion at this point, but this was not the case.

The final category, Checking for Knowledge, shows a decrease from 20 (33%) questions asked in the baseline lesson to 16 (25%) Queries asked during the QtA lesson. The teacher asked students, "What is an *ally*?" A student correctly responded, "A friend." This is information that is not in the text, and no reference to the word *ally* appears in the text. The teacher asked this in the context of setting up the State of the Union address given by FDR prior to WWII. This question

illustrates the type of background knowledge needed to truly make sense of the text. The investigator can only speculate why the number of Checking for Knowledge questions/Queries decreased from the baseline to the QtA lesson. The assumption is that the teacher felt it was necessary to ensure students had sufficient background knowledge in order to process the text. To do this, the teacher must ask questions that reveal this information.

Table 24 compares the type, frequency, and percentage of questions/Queries asked during the baseline and QtA lessons. The information presented in Table 24 pertains to Text Two.

Table 24

Summary of T1 and T2 Type, Frequency (and Percentage) of Questions/Queries Asked During Text Two Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Queries/questions Asked
T1 Baseline lesson of Text Two	22 (52%)	0 (0%)	6 (14%)	14 (33%)	42
T1 Questioning the Author lesson of Text Two	5 (10%)	14 (27%)	16 (31%)	16 (31%)	51
T2 Baseline lesson of Text Two	31 (52%)	2 (3%)	7 (12%)	20 (33%)	60
T2 Questioning the Author lesson of Text Two	12 (18%)	14 (22%)	23 (35%)	16 (25%)	65

As indicated in Table 24 both teachers asked more Queries in the QtA lesson than the baseline lesson. The number of Queries asked by teachers is not as important as the types of Queries that are being asked. An increase in Construction of Message and Extension of Discussion is present in both teachers' QtA lessons. Subject matter complexity could be one reason that the number increased. In addition, as students begin to engage more with the text, the teachers began to ask more questions to generate a quicker pace of the discussion. Although discussion should decrease the number of questions asked by the teacher, just the opposite may occur. For example, if the teacher asks an Initiating Query and receives immediate feedback, this may prompt them to ask a Follow-up Query. This could produce a rapid fire type of questioning strategy. Discussion in the classroom takes practice and the teachers may feel the need to fill air time with talk.

### **Analysis of Questioning the Author Lesson of Text Two**

From the suggestions written by T1 in her reflective teaching journal it is evident that she wanted students to produce or create something to display comprehension. She wrote, "I should have also done a close reading T chart; evidence vs. interpretation." Convincing teachers that Queries alone can exhibit comprehension of text is an obstacle to conquer. T2 indicates that by planning Queries prior to teaching, he can "see" the direction of his lessons. This indication supports the contention that Questioning the Author (QtA) has the potential to improve both teachers' questioning patterns and students' reactions to and interactions with text. By posing Queries the students can potentially understand the author's ideas and deal with those ideas appropriately.

T2's lesson produced four student questions during the QtA lesson. There were no student questions in the baseline lesson. This indicates progress in the area of open

communication. When students ask questions, they are exhibiting their engagement with the text. Moreover, it signifies that students feel comfortable in the classroom community; that by asking questions, they are opening up the lines of communication. Collaboration among students shines as they work together to “grapple with” the text.

Text Two did produce a large number of Queries asked by both teachers. This could be contributed to the density of the subject matter. Students did not have much background knowledge on the subject of State of the Union addresses nor did they understand that the four freedoms were somewhat different than the freedoms afforded to citizens in the Bill of Rights. This was somewhat confusing and may have contributed to the high number of Queries asked by both teachers. Both teachers also felt it necessary to make modern day connections to Iraq. In order to do this successfully, the teachers had to lead students to the appropriate connections in order for them to make conclusions. I highly doubt students were able to make those connections or conclusions without guidance from the teacher. Additionally, many students neither did not have accurate knowledge of Iraq nor had inaccurate knowledge making the connection an even more difficult task.

If nothing else, both teachers showed improvement in the frequency and percentage of Queries asked in Construction of Message and Extension of Discussion categories during the QtA lessons. This single-handedly indicates that the teachers are moving more toward meaning making and less concerned about basic recall of information. The more students practice the skill of questioning the text, the more adept they will become, especially when the teacher provides plenty of positive reinforcement about their performance. QtA requires that “students are engaged in shared investigation of meaning, not just shared retrieval of information and beliefs,

so participation tends to be active” (Beck, McKeown, Hamilton, & Kucan, 1997, p. 80). Surely, this is the case as both teachers begin to change their approach to teaching expository text.

T1 wrote the following in her reflective teaching journal after teaching the QtA lesson of Text Two:

Although students were interacting with the text and engaged in the reading process, more time was needed to be dedicated to meta cognitive practices. The students were able to follow the teacher initiated real world comparisons, these however, were not student generated. I should have had the students participate in a visualizing activity. Perhaps I could have had had them create their own personal freedoms box. This manipulative could have then served as their individual interpretations and representation of essential freedoms. We could have discussed these representations and I could have had the students attempt to justify their responses. This would have allowed for a deeper understanding of the text. Furthermore this would have created opportunity in debating Roosevelt’s justification of the necessity and means at which he chose to protect these essential freedoms. I should have also done a close reading T chart; evidence vs. interpretation. Although the text structure was problem/solution, I had the opportunity to have them reach synthesis and ask for alternatives to Roosevelt’s solution. I failed to realize this opportunity. I want to revisit this text with a different approach.

T2 wrote the following:

In the article *The Four Freedoms* I was hoping that the class would understand what kind of nation Franklin Roosevelt was trying to develop. We were trying to answer what was our “destiny” as a nation. Also, I was hoping that they would connect those four freedoms to today’s world and the views of President Bush. We compared the impending world war and today’s war in Iraq. The class looked at Roosevelt’s four essential freedoms for a nation; speech and expression, worship your own God, freedom from want and the final freedom, freedom from fear. We first defined what we thought that Roosevelt meant by each, and then drew comparisons between the U.S. citizens in 1941 and the Iraqi citizens in 2004. By preparing my Queries prior to teaching, I can successfully guide the students to my objectives. I can see where my lessons are going now, unlike the first lessons prior to the Questioning the Author training.

Table 25 displays the information gathered from the reflective teaching journals from T1 and T2 after the QtA lessons were taught. The goals of the teachers were analyzed and classified from the reflections written in the teachers’ reflective teaching journals.

Table 25

Teachers One (T1) and Two (T2): Reflections on Text Two Questioning the Author Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	Comprehension/ Interact and engage with text	personal connections/ analysis real world comparisons
T2	prediction comprehension	make comparisons personal connections

The goals that the teachers set for themselves and their students correlate with the instructional design and implementation. T1 writes, “Although students were interacting with the text and engaged in the reading process, more time was needed to be dedicated to meta cognitive practices.” This clearly is aligned with her goal of “interact and engage with text.” She wanted students to make personal connections and real world comparisons, which they were able to do successfully.

T2 indicates progress and seems proud of the work he and his students are doing. He writes, “By preparing my Queries prior to teaching, I can successfully guide the students to my objectives. I can see where my lessons are going now, unlike the first lessons prior to the Questioning the Author training.” This clearly supports the evidence that QtA improved the questioning strategies of the participants in this study. Moreover, teachers began to view themselves as successful, an important component of teacher efficacy.

### 3. Text Three: Questioning the Author (QtA) Lesson

The third text, *A Response to Terror*, is an excerpt of John Sherman’s speech to Congress in 1877 about the threat of the Ku Klux Klan. Table 26 compares the type, frequency, and percentage of questions/Queries posed during the baseline and QtA lesson of T1.

Table 26

Teacher One (T1): Type, Frequency (and Percentage) of Questions/Queries Asked During Text Three Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions/Queries Asked
Baseline Lesson of Text Three	27 (41%)	5 (8%)	7 (10%)	27 (41%)	66
Questioning the Author Lesson of Text Three	5 (12%)	12 (29%)	14 (33%)	11 (26%)	42

The first category, Retrieval of Information, shows a dramatic decrease from the baseline to the QtA lessons. T1 asked 27 (41%) Retrieval of Information questions in the baseline lesson and five (12%) Queries in the QtA lesson. This indicates a reduction in the desire of the teacher to ask students low-level cognitive questions that do not require much engagement with text. Queries categorized as Retrieval of Information were mainly vocabulary questions during the QtA lesson. One such example occurred when the teacher asked, “What does *capitulation* mean?” A student quickly found the definition and responded, “Surrender.” The teacher did not probe students to discuss the word further or its’ relationship to the text.



The second category, Construction of Message, points to an increase from the baseline lesson to the QtA lesson. In the baseline lesson, T1 asked five (8%) questions, but more than doubles the number of Queries asked in the Questioning the Author (QtA) lesson. A total of 12 (29%) Queries were asked during the QtA lesson. The teacher asked students, “Why is it important to know who wrote the article or who is making the speech?” This information can only be inferred based on what students learned from the text. This Query is asked toward the end of the reading so that students had a chance to process the information contained in the text. A student answered, “Because if it is by someone who didn’t believe like you then you need to know that.” This is an example of students using their background knowledge combined with text ideas to make an inference.

The third category of Queries is Extension of Discussion. This type of Query gives the teacher opportunity to build on students’ responses, allowing for elaboration of ideas that are flowing in the classroom discussion. The Queries helped students to process what others have said. The teacher must ask these Queries in the context of discussion and reading, making planning quite difficult and keeping the teacher on their toes. T1 asked seven (10%) questions during the baseline lesson and doubled (33%) Extending the Discussion Queries during the QtA lesson. The following excerpt from the lesson transcript illustrates this point.

Teacher: Why is it important to know who wrote the article? (*Construction of Message*)

Student 1: Because if it is someone who didn’t believe like you then you need to know that.

Teacher: If you know about the author and their feelings then you can predict what they think. What if a third grader wrote the article? (*Extension of Discussion*)

Student 2: They have lack of knowledge.

Student 3: They don't know anything about this.

Teacher: You want the source to be credible. You go to someone you trust, you want to make sure the source can be trusted. What is the point? (*Extension of Discussion*)

Student 2: They can persuade you.

Student 4: Yeah, to think like them.

Teacher: Exactly.

The Checking for Knowledge category decreased significantly from baseline to QtA lessons. In the baseline lesson, 27 (41%) Checking for Knowledge questions were asked by T1 and in the QtA lesson only eleven (26%) Queries were raised. This indicates a decrease of 16 questions. The majority of the Checking for Knowledge Queries posed during the QtA lesson helped to establish a purpose and context for reading. T1 asked, "Who won the Civil War?" A student responded, "The North." T1 then asked, "Who is angry?" Another student stated, "The South." This simple exchange helped to establish the reasons for the actions of the KKK. This connection helped students understand why the KKK was formed and where they were spreading terror according to the author.

During the QtA lesson of Text Three, three student questions were asked. Although this is not a significant number, it indicates the willingness of students to speak freely in the classroom. Moreover, ten student exchanges occurred during this lesson. Student exchanges

included students speaking to one another about the text usually in the form of a statement versus a question. No student questions were asked and no student exchanges were made during the baseline lesson.

T2 asked a total of 26 Queries during the lesson of Text Three. Table 27 compares the type, frequency and percentage of questions/Queries asked during the baseline and QtA lessons.

Table 27

Teacher Two (T2): Type, Frequency (and Percentage) of Questions/Queries Asked During Text Three Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions/Queries Asked
Baseline Lesson of Text Three	20 (67%)	0 (0%)	1 (3%)	9 (30%)	30
Questioning the Author Lesson of Text Three	9 (35%)	7 (27%)	7 (27%)	3 (11%)	26

As signified in Table 27, T2 asked relatively the same amount of questions during the baseline lesson and the Questioning the Author (QtA) lesson. Noteworthy is the type of questions/ Queries asked in each lesson. During the QtA lesson nine (35%) Retrieval of Information was asked, which is considerably less than the baseline lesson. Like the baseline lesson, T2 asked students, “What does KKK stand for?” This information is found in the first sentences of the text at the top of the page. A student answered, “Ku Klux Klan.” The teacher soon followed with the question, “What time period are we talking about?” The same student replied, “1871.” This is found in the second sentence of the text. These simple recall of factual

questions helps to establish for students a purpose for reading while contributing to their background knowledge.

Seven (27%) Construction of Message Queries was asked during this lesson. This is quite an improvement given that the teacher asked no questions/Queries during the baseline lesson. Shortly into the lesson, the teacher asked, “Why did the KKK start in the South?” A student replied, “Slaves were free and got free.” The teacher moved onto the next question in the lesson and did not extend the discussion at this time.

The third category of Queries, Extension of Discussion, consists of Queries that take the students’ responses one step further to enhance and elaborate the discussion of text. Seven (27%) Extension of Discussion Queries was asked during this lesson. Only one (3%) Extension of Discussion question was solicited during the baseline lesson. During the Questioning the Author (QtA) lesson the teacher and students were discussing the meaning of the term *covert* and how that applied to the political organization, the KKK. The following excerpt illustrates the teacher extending the discussion to achieve meaning.

Teacher: What kind of organization is it [KKK]?

Student 1: Secret.

Teacher: And?

Student 2: Political.

Teacher: Give me another example of a political organization.

Student 3: The elephant and the donkey.

Teacher: Which are?

Student 3: Democrats.

Teacher: And?

Student 4: Republicans.

Teacher: Their language is covert, which means?

Student 5: Secret.

Teacher: Good, explain that.

Student 5: Different words mean different things.

Teacher: Good.

This excerpt exemplifies the ability of the teacher to question on the spot (extend the discussion) in order to keep the flow of the conversation going and clarify text ideas and the author's ideas while encouraging students to engage with the text. Although this was not a planned Query by the teacher, it was a "teachable moment" or an opportunity to extend what students were learning and encourage students to think beyond the text.

Checking for Knowledge is the final category and T2 asked three (11%) Queries. The baseline lesson yielded nine (30%) questions. During the QtA lesson the teacher asked, "What ended five years before this was written?" A student replied, "The Civil War." This information is not stated in the text. It can be found solely in the mind of the students, which connects to previous learning in class. It clearly connects new and previous learning for the students. Finally, two student questions were generated during the QtA lesson, which were not present in baseline lesson.

Table 28 compares the type, frequency, and percentage of questions/Queries asked during the baseline and QtA lessons. The information presented in this table pertains to Text Three.

Table 28

Summary of T1 and T2 Type, Frequency (and Percentage) of Questions/Queries Asked During

Text Three Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Queries/questions Asked
T1 Baseline lesson of Text Three	27 (41%)	5 (8%)	7 (10%)	27 (41%)	66
T1 Questioning the Author lesson of Text Three	5 (12%)	12 (29%)	14 (33%)	11 (26%)	42
T2 Baseline lesson of Text Three	20 (67%)	0 (0%)	1 (3%)	9 (30%)	30
T2 Questioning the Author lesson of Text Three	9 (35%)	7 (27%)	7 (27%)	3 (11%)	26

As indicated in Table 28 both teachers asked more questions in the baseline lesson than the QtA lesson. The type of Queries asked by both teachers improved in the QtA lessons. An increase in Construction of Message and Extension of Discussion is present in both teachers' QtA lessons. T1 increased from 8 percent to 29 percent Construction of Message Queries and from 10 percent to 33 percent Extension of Discussion Queries in the QtA lesson. Likewise, T2 increased from 0 Construction of Message questions in the baseline lesson to 27 percent in the QtA lesson. His Extension of Discussion category went from 3 percent in the baseline lesson to 27 percent in the QtA lesson. This illustrates the positive shift in teachers' questioning patterns.

### **Analysis of Questioning the Author Lesson of Text Three**

Both T1 and T2 asked fewer Queries/questions during the QtA lesson versus the baseline lesson. T1 asked a total of 66 questions during the baseline lesson and 42 Queries during the QtA lesson. T2 asked fifty percent less Queries during the QtA lesson. He stated, “By planning the questions, I could then successfully lead students through the text.” This illustrates how much smoother the lessons seem to flow when using the QtA strategies. Both teachers improved in the frequency and percentage of Construction of Message and Extension of Discussion Queries in the QtA lessons. In the baseline lesson T2 asked five (8%) Construction of Message questions and 14 (33%) Queries in the QtA lesson, similarly, T2 did not ask any Construction of Message questions and asked 7 (27%) Queries in the QtA lesson. In a like manner, both teachers improved in the category of Extension of Discussion. T1 asked seven (10%) Extension of Discussion questions during the baseline lesson and increased to 14 (33%) Queries, while T2 asked one (3%) Extension of Discussion question during the baseline lesson and 7 (27%) Queries in the QtA lesson. This shows dramatic improvement in the types of Queries asked by both teachers during the QtA lessons.

Like previous QtA lessons, this strategy encouraged text engagement at a higher level. Proof of this lies in the ability of students to ask questions. Question asking by students was minimally present in the baseline lessons. The analysis documents only clarifications asked by students during the baseline data, on the contrary, the QtA data indicates students asking questions of both their teacher and classmates.

Students displayed a willingness to engage with the text during the QtA lesson. Fred Newman (1989) defines engagement as “the student’s psychological investment in learning, comprehending, and mastering knowledge of skills” (p. 34). The QtA lessons give the students

the ability to engage with text that they were unable to do previous to the teachers' implementation of this strategy.

T1 wrote the following in her reflective teaching journal:

To begin, the author's purpose for writing varied greatly from the purpose I had set forth for reading. I think this caused confusion when reading. I felt that the students had difficulty focusing on the author's message that I wanted them to receive versus the author's purpose. I began with the KWL on the KKK. The students automatically approached the text then thinking they were going to learn about the KKK. Although the background knowledge of the KKK and its use of terror as a means of control were absolutely necessary to understanding the text, this should have been introduced in a separate lesson. We worked our way through the text after developing and outlining the purpose and function of the KKK. I failed to be specific enough in my purpose for reading. I needed to pay more attention to the techniques that the author employed to provoke emotion and to argue his position. Although the students asked higher order questions during reading, their limited background knowledge proved an obstacle to full comprehension. Because of this, students had difficulty making inferences. I would not scaffold this text because one of my fundamental reading goals is to increase this group's reading stamina. I would definitely commit more time to a solid introduction of the underlying principles of the idea of rule and control through terror along with more modern day examples of such organization and hate crime in general.

T2 wrote the following:



Although this is a tough subject, I feel the students worked much better with this text than in the first lesson with this text. By planning the questions, I could then successfully lead students through the text. I did try to take time to allow students to elaborate on certain points and opinions that they had, but this is tough material, and many students had misconceptions about the KKK. I tried, to the best of my ability, to change students' misperceptions and give them the information needed to fully comprehend the text. I think this was a success, definitely better the second time around since I had time to really plan my objectives per se.

Table 29 indicates the teachers' questioning goals for the lesson as well as, the student engagement goals. Each teacher refers to comprehension as the goal for the lesson as documented in their reflective teaching journals.

Table 29

Teachers One (T1) and Two (T2): Reflections on Text Three Questioning the Author Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	set purpose for reading comprehension interact/engage with text	discussion personal connections make inferences real world comparisons
T2	comprehension build background knowledge	elaboration/discussion personal connections/discussion

As indicated in Table 29, one of T1's questioning goals was to assist students as they set a purpose for reading. Her reflective journal indicates that this did not happen before reading the text. She writes, "To begin, the author's purpose for writing varied greatly from the purpose I set forth for reading. I think this caused confusion when reading." She adds, "I failed to be specific enough in my purpose for reading." A skilled reader sets a purpose for reading, and it seems as if this teacher is doing this for the students instead of the students doing it for themselves. This is not an issue I anticipated during the QtA training. Her student engagement goal of making inferences and personal connections is limited by, as she writes, "...their limited background knowledge proved an obstacle to full comprehension. Because of this, students had difficulty making inferences." Although T1 feels like this lesson was unsuccessful, it supports the contention that she is becoming more aware of her instructional implementation. Knowing that students had difficulty and trying to figure ways to deal with this in the future, shows that her desire for improved student engagement and interaction with text is present.

T2's student engagement goals for this lesson are elaboration and discussion. He writes, "I did try to take time to allow students to elaborate on certain points and opinions that they had, but this is tough material, and many students had misconception about the KKK." He certainly allowed students time to discuss their misconceptions and he dealt with these misconceptions appropriately in class. From his journal entry the investigator viewed this lesson as a success. He writes, "Although this is a tough subject, I feel the students worked much better with this text than in the first lesson with this text." He adds, "I think this was a success, definitely better the second time around since I had time to really plan my objectives per se."

#### 4. Text Four: Questioning the Author (QtA) Lesson

Text Four, *The Scapegoats*, is a text divided into two parts. The first part is written from the perspective of a Jewish concentration camp prisoner. The second part of the text is a three-paragraph summary of Hitler and his use of the Jewish people as scapegoats for all of Germany's problems. Table 30 compares the type, frequency, and percentage of questions/Queries asked in the baseline and QtA lesson taught by T1.

Table 30

Teacher One (T1): Type, Frequency (and Percentage) of Queries/questions Asked During Text Four Baseline and Questioning the Author Lessons

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions/Queries Asked
Baseline Lesson of Text Four	14 (22%)	3 (4%)	7 (11%)	40 (63%)	64
Questioning the Author Lesson of Text Four	2 (5%)	12 (29%)	14 (33%)	14 (33%)	42

As shown in Table 30, a significant decrease is apparent in the number of Queries asked by T1 during QtA lesson of Text Four as compared to the baseline lesson. T1 asked a total of 64 questions/Queries during the baseline lesson and 42 during the QtA lesson. A decrease in Retrieval of Information questions indicates that the teacher relied less on simple recall of text information and turned her attention to Construction of Message and Extension of Discussion Queries that require students to become actively involved with the text. T1 asked 14 (22%)

Retrieval of Information questions during the baseline lesson. A significant decrease occurred during the QtA lesson where she only asked two (5%) Queries of this type. During the baseline lesson T1 required students to make an inference (Construction of Message) three (4%) times, but increase that number to 12 (29%) during the QtA lesson. Similarly, students were asked to extend the discussion seven (11%) times during the baseline lesson and 14 (33%) times during the QtA lesson. Checking for Knowledge occurred 40 (63%) times during the baseline lesson and 14 (33%) times during the QtA lesson. The number of student questions topped out at 12 during the QtA lesson, the highest number of questions asked of students during the study, a momentous occurrence. This signifies that students are not only engaging with text, they are participating in discussion in a classroom whose atmosphere encourages it.

Table 31 shows a comparison between the baseline and QtA lessons taught by T2. The type, frequency, and percentage of questions/Queries are represented.

Table 31

Teacher Two (T2): Type, Frequency (and Percentage) of Queries/questions Asked During Text Four Baseline and Questioning the Author Lessons

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Questions/Queries Asked
Baseline Lesson of Text Four	16 (59%)	3 (11%)	1 (4%)	7 (26%)	27
Questioning the Author Lesson of Text Four	7 (13%)	15 (28%)	20 (37%)	12 (22%)	54

The total number of questions asked by T2 increased in the QtA. This is surprising given that more student conversation occurred during this lesson. There were a total of three student questions during the QtA lesson. T2 decreased the number of Retrieval of Information questions asked from 16 (59%) during the baseline lesson to seven (13%) Queries during the QtA lesson. Most of the simple recall Queries occurred at the beginning of the QtA lesson to familiarize students with the pending information that they would deal with in the text. For example, T2 asked students, “Where did this take place?” and “Who is involved?” Since the text began with a letter from a concentration camp prisoner to her sister, the teacher seemed to want to establish the context of the reading. It would be somewhat confusing for the student to read the letter without some sort of preparation, although QtA emphasizes the importance of posing Queries during reading, while it is happening, this is one obstacle with which teachers’ seem to struggle. With time and practice, this can become more automatic and part of their classroom instruction.

T2 did increase the number of Construction of Message Queries during reading, 15 (28%) in the QtA lesson and three (11%) in the baseline lesson. During the QtA lesson the teacher asked students to look at the picture, which accompanied the text and make an inference. He asked, “What does the picture tell us?” A student responded, “They have numbers on their hands. They are Jews.” The teacher then extended the discussion when he asked, “Tell me more about that.” This simple statement evoked several statements and observations by students making them engage at a higher level than in the previous lesson.

Table 32 compares the type, frequency, and percentage of questions/Queries asked during the baseline and QtA lessons. The information presented in this table pertains to Text Four.

Table 32

Summary of T1 and T2 Type, Frequency (and Percentage) of Questions/Queries Asked During

Text Four Baseline and Questioning the Author Lesson

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge	Total Number of Queries/questions Asked
T1 Baseline lesson of Text Four	14 (22%)	3 (4%)	7 (11%)	40 (63%)	64
T1 Questioning the Author lesson of Text Four	2 (5%)	12 (29%)	14 (33%)	14 (33%)	42
T2 Baseline lesson of Text Four	16 (59%)	3 (11%)	1 (4%)	7 (26%)	27
T2 Questioning the Author lesson of Text Four	7 (13%)	15 (27%)	20 (37%)	12 (22%)	54

As indicated in Table 32 T1 asked a total of 64 questions in the baseline lesson and 42 Queries in the QtA lesson. She significantly decreased in asking Retrieval of Information Queries in the QtA lesson of Text Four. She went from 14 (22%) to two (5%). Similarly, T1 asked 40 (65%) Checking for Knowledge questions in the baseline lesson and 14 (33%) in the QtA lesson. The total number of Queries decreased from the baseline to the QtA lesson.

Oddly, T2 increased in the type, frequency and percentage of Queries asked in the QtA lesson compared to the baseline lesson. The baseline lesson produced 27 questions and the QtA lesson produced 54 Queries. This can be attributed to the increase in Extension of Discussion

Queries during the QtA lesson. Originally, T2 asked only one Extension of Discussion question, but he asked 20 in the QtA lesson. The increase in total number of Queries shows improvement in the teacher's ability to create an atmosphere that promotes critical thinking and classroom discussion. By extending the discussion 20 times during the QtA lesson, T2 displays the knowledge gained from QtA training.

#### **Analysis of Questioning the Author Lesson of Text Four**

Review of the type, frequency, and percentage of questions asked by T1, it is evident that in the baseline lesson, she was more concerned with Retrieval of Information 14 (22%) questions and Checking for Knowledge 40 (63%) questions. In the QtA lesson, the frequency of Construction of Message 12 (29%) Queries and Extension of Discussion Queries 14 (33%) increased. While teaching Text Four, the students asked a total of 12 questions either of their classmates or teacher. This reinforces the notion that students are actively engaged with the text and feel as if they are truly making meaning. Students are moving from "believing every word" of the author to understanding that the author is a human being and "fallible" or at fault. It gives students the courage to attack a text as it should be. The type of questions asked by students has changed as well. During a discussion of Hitler, one student asked, "Was his [Hitler] rise to power sudden?" This was asked in the context of discussion of the text. There was no prelude about Hitler to suggest that his rise to power was sudden. This came from the student's curiosity as they discussed the text. Shortly thereafter, another student asked, "Why didn't the Jewish people rebel?" This, too, was in the context of the same discussion. Students were truly beginning to question the text, the teacher and their own knowledge about Hitler and The Holocaust. Finally, one student asked, "Could this happen today?" He was asking a rhetorical question, no answer

was needed for he was thinking aloud. This indicates progress of students' ability to engage with text. It also indicates a new way of belonging in the classroom community.

T2 writes in his journal "One of the topics that generated an excellent discussion centered on why the guard at Auschwitz would be sympathetic." This concept was of much debate between students during the class. The teacher led the discussion, and extended the discussion 20 (37%) times. Extension of Discussion Queries ranked the highest during this lesson since the students lead the discussion about the guard. The total number of questions asked during the QtA lesson was greater than the number of questions asked during the baseline lesson, but this may be characteristic of the teacher feeling the need to consistently keep the conversation flowing. Once students began to interact and engage with the text ideas, the teacher built upon that flow of ideas to keep students involved and talking. Comparing the baseline and QtA lesson, it becomes clear that students are involved at a different level during the QtA lesson. Since this is the final lesson in the study and the teachers were feeling comfortable with the QtA strategy, the evidence suggests that T2 embarked on more classroom discussion in the QtA lesson than in the baseline lesson. More student-generated questions prompted the teacher to not only answer the questions asked by students, but he also probed other students to unite in discussion. Additionally, T2 asked 15 (27%) Construction of Message Queries in the QtA lesson and only three (11%) in this baseline lesson. This evidence suggests that T2 was engaging students at a higher level than in the baseline lesson.

T1 wrote the following in her reflective teaching journal:

After teaching the final text, *The Scapegoats*, it became very clear to me how involved my students are with the texts we are using in class. They are active, talking, and no heads are on the desks. This text was particularly enjoyable to



teach since students had sufficient background knowledge. Students were having discussions with their peers and me. This is a welcomed change.

T2 wrote the following in his reflective teaching journal:

The article *The Scapegoats* went extremely well. The class had a solid background on the topic, which made discussion and comprehension significantly easier. We first read the background information prior to reading the letter from Rebekkah to her sister. The students were surprised to read that Hitler and the Nazi's had targeted other groups besides the Jews for their disdain.

One of the topics that generated an excellent discussion centered on why the guard at Auschwitz would be sympathetic. We discussed what he must have felt having to kill innocent people without having any regard for their lives. The picture that accompanies the article also lent itself to that discussion. The prisoners were standing with their hands in the air. Exactly how sympathetic was he?

The class came to the conclusion that Rebekkah was writing her sister. It is not immediately known who she is writing to, however, they picked up on who Rachel was when she was asked to flee and preserve the family name. The students then were asked to complete a 3-2-1 chart. They would write three things they learned in the article, two interesting facts and one question they would ask Rebekkah.

Table 33 represents the teacher questioning and student engagement goals of T1 and T2 during the Text Four lessons. These descriptors indicate the written responses taken from teachers' reflective teaching journals.

Table 33

Teachers One (T1) and Two (T2): Reflections on Text Four Questioning the Author Lesson

	Teacher Questioning Goal(s)	Student Engagement Goal(s)
T1	comprehension/involvement tap background knowledge	discussion/active engagement personal connections/discussion
T2	tap background knowledge comprehension	discussion discussion/generate conclusions

T1's journal entry reflects the knowledge gained from Questioning the Author (QtA) training. Student engagement, which was not present previously in her teaching repertoire, is now something she recognizes. Her instructional goals have shifted. She writes, "Although students were interacting with the text and engaged in the reading process, more time was needed to be dedicated to meta cognitive processes." She readily recognizes that students were "interacting" and "engaged" but now the bar has been raised. She expects more from herself and her students. This evidence suggests that the teacher may be taking more responsibility for student outcomes and achievement.

A trend emerges in the journal entries of both teachers. Both teachers mentioned comprehension and background knowledge activations as goals for their students to achieve. This is accomplished through discussion. T2 writes, "One of the topics that generated excellent

discussion centered on why the guard at Auschwitz would be sympathetic. We discussed what he must have felt having to kill innocent people without having much regard for their lives.”

Similarly, T1 writes, “Students were having discussions with their peers and me.” She ends her journal entry with “This is a welcomed changed,” marking the end of the study.

### **Outcome of Questioning the Author Lessons/Summary of Findings**

Table 34 indicates the teacher questioning and student engagement goals for the QtA lessons taught by T1 and T2. By comparing these goals to the baseline goals a theme emerged.

Table 34

Teachers One (T1) and Two (T2): Reflections on Questioning the Author Lessons

Participants	Teacher Questioning Goal(s)	Student Engagement Goal(s)
Teacher 1		
Text One	comprehension/process/engage with text	personal connections/analysis/self-monitoring/question asking
Text Two	comprehension/interact and engage with text	personal connections/analysis/read world comparisons
Text Three	set purpose for reading/comprehension	discussion/personal connections/make inferences/real world comparisons
Text Four	comprehension/involvement	discussion/active engagement/personal connections/discussion
Teacher 2		
Text One	comprehension/process/engage with text	personal connections/discussion/question asking
Text Two	prediction/comprehension	make comparisons/personal connections
Text Three	comprehension/build background knowledge	personal connections/discussion
Text Four	tap background knowledge/comprehension	discussion/generate conclusions

Both teachers went from “clarification,” “identifying,” and “retrieval of factual information” to “discussion,” personal connections,” generate conclusions” and “real world comparisons.” This shift in the teachers’ reflective teaching journals indicates that their pedagogical ideals and beliefs changed by participating in the QtA training. This was accomplished in a short period of time. A theme of engagement for students emerged during the QtA lessons.

Figure 4 represents the type and percentage of Queries asked during the QtA lessons taught by T1. Figure 5 represents the type and percentage of Queries asked by T2 during the QtA lessons.

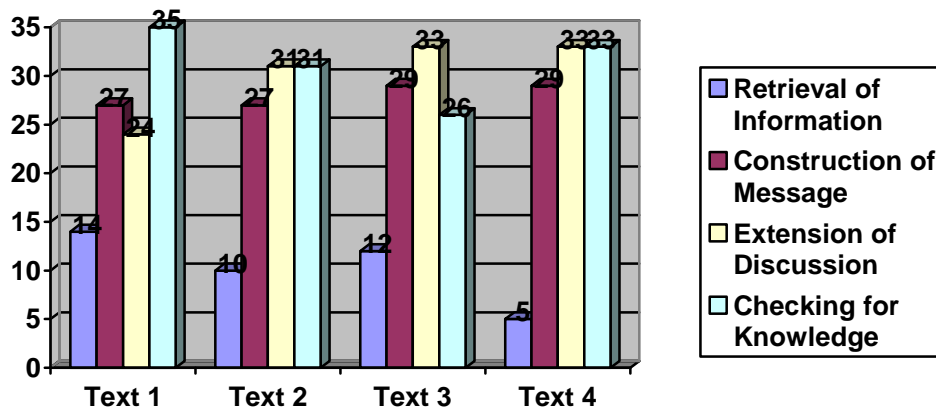


Figure 4. Teacher 1: Type (and Percentage) of Queries Asked During Questioning the Author Lessons

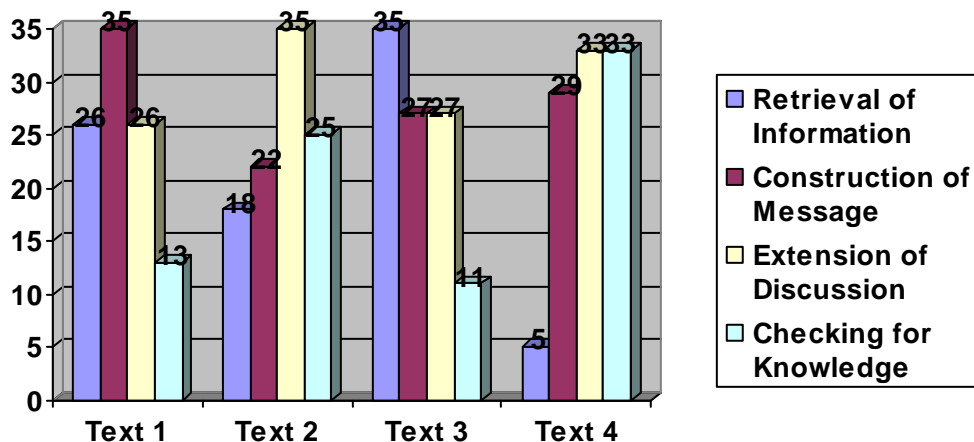


Figure 5: Teacher 2: Type (and Percentage) of Queries Asked During Questioning the Author Lessons

In addition to the frequency of questions, the teachers shifted the classroom discourse from a traditional question/answer session to more of a dialogue or discussion. Initially, both teachers asked a large number of Retrieval of Information and Checking for Knowledge questions. Figure 4 indicates the percentage of questions asked during the baseline lesson. In the baseline lessons, the majority of T1's questions were Retrieval of Information (47%) and Checking for Knowledge (38%), and more than half (58%) of T2's questions were Retrieval of Information as indicated in Figure 5. The second highest percentage of questions asked fall into the Checking for Knowledge category (29%). Although both teachers showed a decline in Retrieval of Information questions and an increase in Construction of Message and Extension of Discussion after the QtA intervention, T2 asked more questions overall. His Retrieval of Information Queries during the QtA lessons was much higher than T1. The difference between the two teachers may lie in their philosophy of reading instruction and the level of content knowledge they require students to gain from the text. One of the biggest obstacles in the implementation of QtA is convincing teachers that the "gist" of the text is as important as the

dates and names. Although both teachers decreased in the number of Checking for Knowledge Queries asked during the QtA lessons, the percentages are still high supporting the notion that teachers were learning what students did not know when questioning the text, which required the teacher to continually check what background knowledge students did or did not possess in order to engage with the text.

Figure 6 signifies the type and percentage of questions/Queries asked during the baseline and QtA lessons of T1. Likewise, Figure 7 signifies the type and percentage of questions/Queries asked during the baseline and QtA lessons of T2.

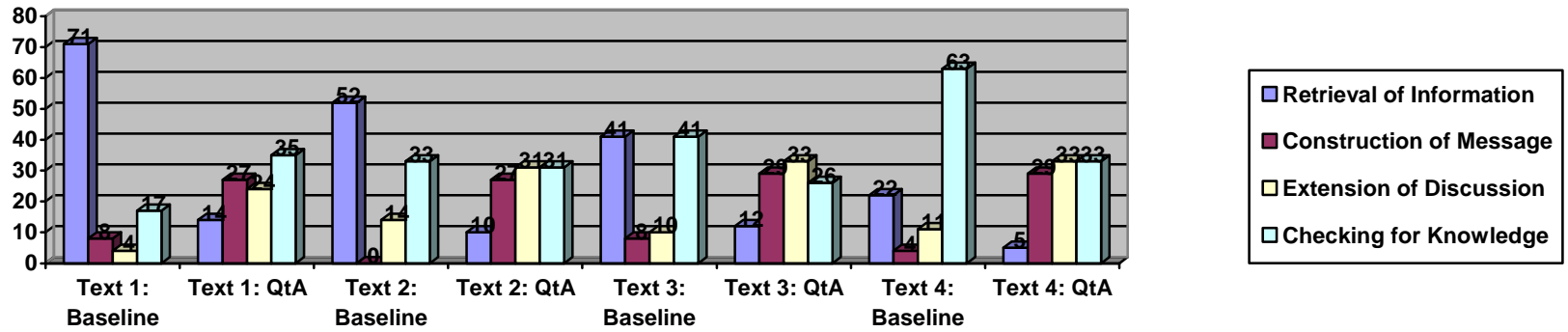


Figure 6: Teacher 1: Type (and Percentage) of Questions/Queries Asked During Baseline and Questioning the Author Lessons

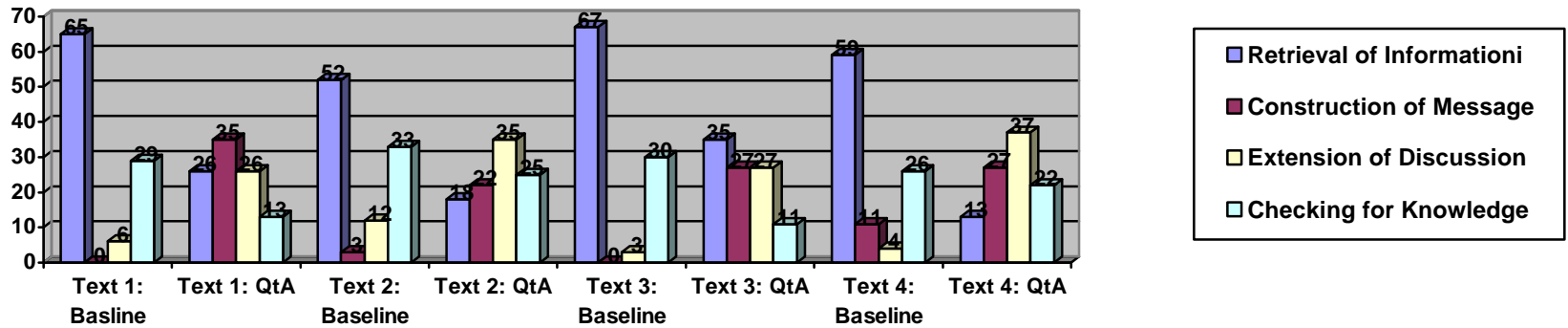


Figure 7: Teacher 2: Type (and Percentage) of Questions/Queries Asked During Baseline and Questioning the Author Lessons



As indicated in Figure 6, the baseline lessons of T1 consists of a large percentage of Retrieval of Information questions. Text One produced 71 percent Retrieval of Information, the largest percentage asked during all lessons taught by this teacher. On the contrary, the same lesson, using the QtA strategy, produced only 14 percent Retrieval of Information Queries. Likewise, the teacher asked 52 percent of her questions in the Retrieval of Information category, but reduced that percentage to 10 percent in the QtA lesson. This theme continues across all four texts.

T1 asked a minimal amount of Construction of Message and Extension during the baseline lessons, but improved in her ability to ask these types of Queries during the QtA lessons. For example, during the baseline lesson of Text One, T1 asked 8 percent Construction of Message and 4% Extension of Discussion questions. After the QtA training was implemented, her ability to ask these types of Queries increased to 27 percent Construction of Message and 24 percent Extension of Discussion. Text Two produced like results. The baseline lesson produced no Construction of Message and 14 percent Extension of Discussion. During the QtA lesson, T1 asked 27 percent of the Queries in the Construction of Message category and 31 percent in the Extension of Discussion. This pattern is seen across baseline and QtA lessons.

Figure 7 indicates the type and percentage of questions/Queries asked during the baseline and QtA lessons of T2. Like T1, T2 improved in the types of Queries asked during the QtA lessons. During the lesson of Text One, T2 asked 65 percent of his questions in the Retrieval of Information category. Additionally, no Construction of Message questions were asked and only 6 percent of his questions were Extension of

Discussion. In contrast, the QtA lesson of the same text produced 35 percent Construction of Message and 26 percent Extension of Discussion. T2 also decreased the percentage of Checking for Knowledge Queries asked in the QtA lesson. In the baseline lesson he asked 29 percent of his questions in the Checking for Knowledge category and only 13 percent in the QtA lesson. The other texts produced similar results.

An important change in the types of Queries asked during the QtA lesson occurred. A shift from recalling and retrieving information to constructing meaning and extending the discussion is clearly evident. The data analysis shows that when both social studies teachers used QtA, they no longer focused on the basic recall of information in the text, but rather on the requiring students to construct meaning from that text and figure out the author's message. Table 35 indicates the type, frequency and percentage of questions/Queries asked in baseline and QtA lessons.

Table 35

Summary of T1 and T2: Type, Frequency, (and Percentage) of Question/Query Type in Baseline and Questioning the Author Lessons: Teacher One (T1) and Teacher Two (T2)

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge Queries/questions
T1 Baseline Lessons	114 (47%)	14 (6%)	23 (9%)	93 (38%)
T1 QtA Lessons	19 (10%)	51 (28%)	56 (30%)	58 (32%)
T2 Baseline Lessons	114 (58%)	11 (6%)	13 (7%)	57 (29%)
T2 QtA Lessons	38 (21%)	50 (28%)	57 (31%)	36 (20%)

T1 asked a total of 114 (47%) Retrieval of Information and 14 (6%) Construction of Message questions during the baseline lessons. After the QtA training an obvious shift occurred. T1 asked a total of 19 (10%) Retrieval of Information and 51 (28%) Construction of Message Queries. Likewise, T2 asked 114 (58%) Retrieval of Information and 11 (6%) Construction of Message questions during the baseline lessons. After the intervention 38 (21%) Retrieval of Information and 50 (28%) Construction of Message Queries was asked by T2.

The evidence suggests that QtA implementation can have positive effects for students and teachers. Generally speaking by implementing QtA in a non-threatening,

supportive environment it had three astounding effects; (1) improved comprehension of text, (2) a newly formed sense of community in the classroom, and (3) increased student engagement with text.

Comparison of the baseline and QtA lessons shows a dramatic increase in the ability of students to comprehend the text. “When a student can synthesize meaning, in other words, create their own meaning by building on a text’s meaning, they demonstrate strong comprehension abilities” (Keene & Zimmerman, 1997). Once students understood how to deal with text in a meaningful way, they were able to successfully extract meaning. This is supported by their responses to Queries and interactions with classmates and the teacher. Prior to QtA training students more often than not, read the text, or listen to a text being read aloud, and then answer comprehension questions. QtA requires students and the teacher to engage with the text *during* reading. Once students were comfortable with this type of engagement with text, they seemed to read more critically making other components of reading more accessible. Students were beginning to monitor their own comprehension, which can be substantiated through their questions asked of classmates and the teacher. It was apparent they were monitoring their own comprehension as they read the text. Finally, students were displaying strategies that skilled readers use such as setting a purpose for reading, summarizing, and synthesizing. This was not the case during the baseline data collection.

A second effect of the QtA lessons was the sense of classroom community developed during the second half of the study. Students were beginning to feel like they belonged and sharing a commonality with classmates. A community is a place where the “individuals share common values, goals, and activities” and “where social bonds are

established and individuals can flourish” (Bredekamp & Rosegrant, 1992, p. 81). As students embarked on dealing with text in a different manner, they also took on the responsibility of trusting each other and their teacher. Every student began on the same page with a blank slate, per se. This leveled the playing field, and, in the investigator’s opinion, opened the door to a community of learners. It became clear to students that the author of the text could be at fault and this knowledge gave students freedoms they never had as readers. The teacher and students were apprentices, novices, in this way of learning and thinking; this helped to establish their sense of belonging. As the teachers created a safe, inviting, non-threatening environment, the students were able to relate positively to others, explore their abilities, and actively engage in learning. “Both the students and the teacher work collaboratively to grapple with ideas and build understanding. This ‘grappling’ during reading gives students the opportunity to hear from one another, question and consider alternative possibilities, and test their own ideas in a safe environment” (Beck & McKeown, 2001). This effect of a caring environment helped to sustain students’ abilities to comprehend the text in new and meaningful ways. “When a school meets students’ basic psychological needs, students become increasingly committed to the school’s norms, values and goals. And by enlisting students in maintaining this sense of community, the school provides opportunities for students to learn skills and develop habits that will benefit them throughout their lives” (Schaps, 2003, p. 31). In this case, both teachers were able to effectively create a setting where the goal was comprehension and students worked collaboratively to work towards this goal. Specifically, students began to feel like they belonged and were connected with their classmates in some way, and the result was the sentiment of competence. Students were

given the opportunity to be part of a dynamic group and participate as a contributing member of that group.

A third effect of QtA was the ability of students to engage with the text, their teacher and one another. Teachers progressed from emblematic question/answer sessions to discussions. Based on transcripts, students went from asking no questions in the baseline data to asking many questions per lesson during the QtA lessons. The teacher's role from all-knowing teacher to facilitator helped to transition students to a new way of thinking and perceiving. At first the students seemed to get frustrated as the teacher frequently stopped reading the text to "Think Aloud" (Davey, 1983) by modeling for students how to deal with and grapple with text. Gradually students began to anticipate the teachers' interruptions and initiated a few Queries of their own. I predict that students will do more of this as they continue their work with QtA.

Overall, the three effects that QtA had on the teachers and students in this study are only a beginning. That is to say that as the teachers continue to use QtA and become more proficient in their implementation, these effects will most likely become more observable. Additionally, it is imperative to state that the areas of improvement are entwined, one interdependent and mutually supporting of the other. To illustrate this point, in order for students to become actively engaged with text, classmates and their teacher, a sense of community must materialize. For students to demonstrate improved comprehension, they must be engaged in an environment that is non-threatening and encouraging. In other words, QtA has the potential to single handedly improve many components of classroom interactions.

## **Summary**

The two teachers that participated in this study participated in an intervention staff development based on Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora & Kucan, 1996). This intervention proved to develop both the teachers' ability to effectively question students when dealing with expository text. In addition, QtA served to aid students in their ability to actually engage with text to make meaning. The results of the data compliment previous research on this topic. The data collected verifies that QtA is a best practice in reading. Research supports active engagement with text and QtA provides the opportunities for students to do that in a non-threatening, supportive environment. The data collected during the pre and post lessons reflects a true picture of each teacher and their students' journey to comprehension. Their willingness to learn made QtA successful in a short period of time.

## **CHAPTER V**

### **DISCUSSION**

#### **Introduction**

One of the fundamental tasks of teachers is to stimulate critical understanding and thinking in students. By asking thought provoking questions, teachers require more than simple rote recall of information; they challenge, inspire, and extend student thinking and curiosity. The research to date shows that teachers asking simple recall questions-- that do not require much cognitive input-- dominate the majority of classroom discourse. When teachers dominate classroom discourse with these types of questions, it leaves little time for students to speak much less think beyond the confines of the text. If it is the duty of classroom teachers to help students make sense of text, then they must serve as guides as students navigate complicated subject matter text. Through questions, teachers can begin to help students think beyond the text, question the author's authority and message, and compose insightful conclusions about text. Therefore, the type and quality of the teachers' questions becomes fundamentally important in developing teacher effectiveness, which can ultimately effect student achievement.

Intervention programs that target this area of discrepancy would seem to be a major component in increasing teacher effectiveness. In an attempt to explore this possibility, this study explored and examined the effects of an intervention staff development program called Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) on two social studies teachers' questioning patterns and the effects these questions have on student achievement. Two questions drove this study: (1.) What effects do middle school social



studies teachers' questions have on student comprehension of social studies text? (2.)

What effects does an intervention staff development program have on teachers' questioning patterns?

The evidence suggests that the implementation of QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) can have positive effects for both students and teachers. As teachers began to ask questions that required students to think beyond the confines of the text, students ultimately engaged with that text at higher levels. A shift in questioning strategies began to emerge from recall of textual information to questions that promote critical thinking about text. These two teachers, who predominately asked an abundance of recall questions, found themselves developing and initiating Queries that extended classroom discussion and invited student questions. At the same time, students began to approach informational texts in new ways and with different purposes. They began to question the text, teacher, themselves and their classmates. The text became a vehicle for analysis and synthesis of information.

This chapter will focus on the overall findings of the two research questions posed at the beginning of the study. In addition, a section is devoted to additional observations that emerged during the course of the study. Specifically the following issues will be considered (1) Why student generated questions increased during the QtA lessons? (2) Why student-to-student questions evolved? Finally, the chapter includes the limitations of the study, recommendations for future research, and a conclusion.

## **Addressing the Research Questions**

The goal of this study was to coach two middle school social studies teachers as they questioned their students in ways that promoted higher-level thinking of textual material while providing their students with strategies to deal with social studies text. The research on questioning supports this premise of the study: teachers must learn to ask students questions in ways that help them construct meaning from text while engaging at higher levels. Put another way, teachers must provide students with tools to deal with complicated text so that comprehension occurs.

Two questions drove this study: (1) What effects do middle school social studies teachers' questions have on students' comprehension of social studies text? (2) What effect does a staff development intervention program have on teachers' questioning patterns/behaviors and knowledge? Ultimately, the goal was to identify a way to support these two teachers as they made positive changes in their instruction while improving students' comprehension of text.

The significance of data drawn from the classroom observations, teacher interviews, and the teachers' reflective teaching journal follows.

### **What effects do middle school social studies teachers' questions have on student comprehension of social studies text?**

Traditionally, teachers primarily use questions as a means to check for basic recall of information from text. The evidence from this study suggests that when teachers ask students questions about what they are reading, the questions asked are predominately lower level in nature, requiring minimal cognitive functions. The literature review

conducted prior to the study found this to be true. The baseline data from this study suggested that teachers' questions were used primarily as a means to evaluate students' preparation or lack thereof, review and summarize previous lessons, assess simple rote memory, or simply to keep students on task. Little was done as a way to promote critical thinking or analysis with little to no classroom discussion. Primarily discourse in the classroom came in the form of a teacher-dominated recitation.

The baseline data provide evidence to support the research. Table 36 compares the overall type, frequency, and percentage of questions asked in the baseline lesson and Queries asked during the QtA lessons.

Table 36

Type, Frequency (and Percentage) of Question/Query Asked in Baseline and Questioning the Author Lessons: Teacher One (T1) and Teacher Two (T2)

	Retrieval of Information	Construction of Message	Extension of Discussion	Checking for Knowledge
T1 Baseline Lessons	114 (47%)	14 (6%)	23 (9%)	93 (38%)
T1 QtA Lessons	19 (10%)	51 (28%)	56 (30%)	58 (32%)
T2 Baseline Lessons	114 (58%)	11 (6%)	13 (7%)	57 (29%)
T2 QtA Lessons	38 (21%)	50 (28%)	57 (31%)	36 (20%)

Table 36 indicates that during the baseline lessons T1 asked a total of 114 Retrieval of Information questions, which required students to recall factual information from the text. These questions made up 47 percent of all the questions asked by T1. All the Retrieval of Information questions asked by both teachers consisted of information that was found in the text and required little, if any, reading. Likewise, T2 asked 114 questions of the same type. These questions made up 58 percent of questions asked by this teacher. Suffice is to say that these teachers, who are considered exceptional among colleagues and administration, use questions for reasons other than depth processing of information. There is no evidence to support that the teachers were using the text as a vehicle for critical thinking.

**What effects does an intervention staff development program have on teachers' questioning patterns?**

The aim of the study, to chronicle the effects of an intervention on the questioning patterns of two middle school teachers, was accomplished by: observing, documenting and analyzing the teachers' current practice of questioning used in the classroom, and observing, documenting and analyzing their questioning patterns after the intervention staff development was implemented. QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, & Kucan, 1996) realized the needs of these teachers successfully. The outcome of the intervention staff development was successful in supporting teachers while they learned to adapt, adjust, monitor and evaluate instruction in the classroom, particularly in relation to questioning. The intervention was successful,

in part, due to the previous relationship between the investigator and participants. With seemingly little support, the results were dramatic.

Table 36 shows a dramatic decrease in the type of Queries asked in the classroom after QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) training was implemented. Over the course of four 45-minute lessons, T1 increased in the type, frequency, and percentage of Construction of Message and Extension of Discussion Queries asked during the lessons. T1 asked a total 114 (47%) Retrieval of Information questions in the baseline lessons and 19 (10%) Queries in the QtA lesson. Her ability to ask students questions that involved constructing meaning from text improved during the QtA lessons. She originally asked 14 (6%) Construction of Message questions in the baseline lessons and 51 (28%) in the QtA lessons. In the same manner, she only extended the discussion 23 (9%) times during the baselines lesson and 56 (30%) times during the QtA lesson. Her checking from knowledge decreased in the QtA lessons as well. She originally asked 93 (38%) Checking for Knowledge questions, but asked 58 (32%) in the QtA lessons.

This evidence strongly suggests that QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) had a positive effect on the questioning behaviors of T1. The total number of questions asked during the baseline lessons total 244, and the total number of Queries asked during the QtA lessons total 184. It appears that while the frequency of questions decreased, the quality of classroom interactions increased. Not so important are the numbers of questions asked but the types of questions asked. Her ability to help students deal with text in effective ways is apparent.

Similarly, T2 asked a significant number of Retrieval of Information questions during the baseline lesson. A total of 114 (58%) Retrieval of Information questions was asked. During the QtA lessons only 38 (21%) Retrieval of Information Queries was asked. Likewise, T2 asked a 57 (29%) Checking for Knowledge questions during the baseline lesson but 36 (20%) in the QtA lesson. An increase in the number of Construction of Message and Extension of Discussion Queries during the QtA lesson indicates the teacher's willingness to align his instruction with the strategies learned from QtA training. T2 asked a total of 195 questions in the baseline lesson and 181 in the QtA lesson. Although this decrease is not significant, it does indicate that his questioning patterns shifted to include Queries that prompted, probed and extended students thinking while engaging and interacting with social studies text.

It appears that QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) made teachers aware of how to strategically ask students questions that improved their ability to interact and engage with text in meaningful ways. Additionally, the teachers became increasingly aware of how to support students as they dealt difficult text to promote higher level cognitive functioning. It became clear to both participants the need to not only plan Queries prior to a lesson, but also to allow students the freedom to explore their own ideas and thought processes. A noticeable shift from basic recollection of information in the baseline lessons to constructing meaning in the QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) lessons occurred.

Implementation of the staff development had three observable effects: (1) improved comprehension of text, (2) a newly formed sense of community in the classroom, and (3) increased student engagement.

### **Additional Observations**

One additional observation the investigator made was an increase of student generated questions during the QtA lessons. In the baseline lessons few student questions were observed. On the contrary, the QtA lessons produced five student generated questions within the first lesson alone. A total of twenty student-generated questions were asked in the QtA lessons of T1 and 12 in the QtA lesson of T2.

It appears that students began to feel comfortable asking questions in the classroom due to the new reading strategy implemented that produced a new type of environment for learning. When teachers opened up the lines of communication and explained to students that they were working with text as a team, students responded positively. Therefore, one explanation as to why the students asked more questions during the QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) lessons could be the new sense of classroom community that students sensed. “Both the students and the teacher work collaboratively to grapple with ideas and build understanding. This ‘grappling’ during reading gives students the opportunity to hear from one another, question and consider alternative possibilities, and test their own ideas in a safe environment” (Beck & McKeown, 2001). This ‘safe environment’ is the community where students’ ideas are accepted, honored and heard.

A second observation the investigator made was an increase in student-to-student interactions. The baseline lessons produced no interaction between students related to content material. In contrast, the QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) lessons produced, on average, three student-to-student questions per lesson. This increase could also be attributed to the sense of community and acceptance students seemed to feel.

### **Significance of the Study**

There are three ways in which this study is significant to social studies pedagogy. First, this study has the potential to contribute to the accountability of teachers and school districts to meet state and national standards. By modeling for students how to deal with complicated, content-saturated text, teachers can successfully provide students with appropriate reading strategies. By implementing QtA (Beck, McKeown, Sandora & Kucan, 1996), students learn to recognize what good readers do through teacher modeling. They learn that authors can be “fallible” and do not always hold the key to comprehension. At the same time students learn that by asking questions of the author they can engage with the text to achieve meaning. While teaching students the skills needed to be independent, masterful readers, teachers can take pride in a job well-done. Increased accountability dictates that teachers meet state and national standards and QtA provides teachers with a means to do this.

Second, there is a need for staff/professional development for teachers to improve their questioning behaviors, which can contribute greatly to how we conduct in-service programs in school districts in Pennsylvania. Investigators have consistently found that



adults like children, need to become actively involved in their own learning process. Hampel (1999) states, “Sustained faculty conversation about important educational issues is as rare as it is crucial in most American schools. Doing takes precedence over talking, and isolation is more common than collegiality.” This study aims to not only give students strategies to deal with complicated text, but also give teachers the tools to support those students during this process.

Finally, this study has the potential to close the gap that exists between teachers, where the goal is to bring teachers together to improve their questioning skills in their own classrooms while making instructional decisions that benefit all students. An increased appreciation for practical knowledge enriched by critical reflection has produced a large body of literature that supports teachers’ need to become actively involved in their own learning process; constructivism allows for this process to occur naturally. “Teachers learn best by studying, doing and reflecting; by collaborating with other teachers; by looking closely at students’ and their work; and by sharing what they see” (Darling-Hammond, 1997).

This study gave two teachers the opportunity to work together to improve instructional design by changing the ways in which they questioned their students. Furthermore, Phase I: Rationale/Theory of the intervention staff development gave teachers time to reflect on current classroom practice and think critically about the questions they use in their respective classrooms on a daily basis. Phase 2: Demonstration/Guided Practice/Role-Playing required teachers to prepare Queries, teach a lesson using those Queries, video tape the lesson, and then discuss the outcomes and implications of the lesson. Phase 3: Debriefing/Reflection gave teachers time to discuss

any issues pertaining to QtA. This provided teachers with a way to critically reflect on their own teaching practices. Finally, Phase 4: Coaching integrated professional development and mentoring into an on-going process that gives the teacher an opportunity to display and share their knowledge with colleagues. Teachers are asked to designate a colleague for whom they will train in the QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) strategy. This collaborative effort can serve to improve the relationship between teachers in building and possibly the way teachers view themselves as learners and practitioners.

### **Limitations**

A case study design was used in this study to examine the process each teacher utilized in their instructional questioning strategies. According to Meriam (1998):

A case study design is employed to gain an in-depth understanding of the situation and meaning for those involved. The interest is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation (p. 19).

Creswell (1998) defines case study as "an in-depth exploration of a bounded system (e.g., an activity, event, process, or individuals) based on extensive data collection" (p. 485).

Creswell recommends case study as a methodology if the problem to be studied "relates to developing an in-depth understanding of a 'case' or bounded system" (p. 496) and if the purpose is to understand "an event, activity, process, or one or more individuals" (p.

496). The purpose of this case study was to examine, in-depth, the teaching process of two teachers.

Limitations of this study center on the issues of the timeline of study, small sample size, generalizability, and subjectivities. The first limitation of the study is the timeline of data collection. The investigator spent approximately ten hours with each participant over a six week period. Early on in the study themes began to emerge repeatedly from the data. In this study qualitative methods were used to describe and explain the questioning patterns of two middle school social studies teachers. Using a case study format, two teachers teaching ten lessons provided a great deal of opportunity for collection of data. Since a qualitative model was used, the quality and context of interactions between teachers, students and text was of more importance than the quantity of those interactions. The context of this study is of paramount importance, and therefore may not be typical of all social studies teachers, in all middle schools, in all school districts. The classrooms are unique to the population of students and teachers. The time spent in each classroom produced thick, rich data in what some would consider a short period of time. Collaborating with my participants for this length of time, both as an investigator and colleague, allowed me to investigate emerging themes in the data and discuss these themes with the participants on an on-going basis. Therefore, the length of each case study and the consistent contact I had with the participants lends credibility to my perceptions of this experience.

The second limitation of the study centers on the number of participants. The sample consisted of two teachers who were willing to participate, showed equal interest in potentially improving instructional design and implementation, had similar knowledge

of questioning strategies, and completed similar educational training. These defined areas led the investigator to these participants. Since the study followed case study design, the number of participants was not as important as the emerging findings from the participants. Through the use of methodological triangulation (Creswell & Miller, 2000) I was able to examine three forms of data: observation, interviews and reflective teaching journals. Creswell (1998) refers to “multiple source of information” (p. 61) as a viable data collection tool.

The third limitation focuses on generalizability. Since I was a former colleague of the participants for many years, the relationship that existed between the participants and I was rooted in trust, familiarity and respect. I worked with these teachers as a team member, a literacy coach and as a friend. The relationship was established and solid and I do not believe that someone could replicate this relationship. While implementing the intervention staff development, this relationship progressed, adding yet another dimension to the already solid connection in place. I do believe that my history with the participants made the outcome and results dramatic. With the limited time devoted to staff development, I was fortunate to have incredible results. This was possible, in part, to the established connection I had with the participants.

Finally, when an investigator carries out a qualitative study, it is also important to attend to the subjectivities that the investigator brings to the study. As a former teacher at this school and former colleague of both participants, I felt that this was not an issue in this particular study. I will admit that prior to leaving the school and the study; I held an authoritative position that may have played a part in the willingness of participants. Each participant may have felt obligated to take part even though it would be uncomfortable to

have me in their classrooms. Additionally, the participants may have felt pressured to “perform” in the baseline lessons, although they were continuously reassured that they were not being judged. I am not sure this point was as clearly explicated as it should have been.

### **Recommendations for Future Research**

From the results and conclusions of the study, the following recommendations are offered:

1. A study should be conducted on the relationship between Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) and a sense of classroom community.
2. A study should be conducted on how to develop and maintain trust in a classroom community that inspires students to speak without a sense of repercussions.
3. A study should be conducted specifically on the effects of Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) on students’ questions.
4. A study should be conducted on ways in which students’ questions can help the practitioner recognize the need for more inquiry-based instruction and learning.
5. A study should investigate the effects of an intervention staff development on teacher efficacy.

## **Conclusion**

Expository text in social studies can be complicated to comprehend. To make sense of text, students need strategies that will support their efforts with this text in new and effective ways. Through the implementation of Questioning the Author (QtA) (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) the two middle school teachers in this study were able to increase student engagement with the text, the teacher and their classmates. These two teachers were able to help themselves and their students learn a new way of learning, reflecting and adapting; their willingness to learn an innovative method of instruction ultimately benefited their students in ways they thought not possible. By reflecting on their instructional moves prior to and after the intervention staff development, they were able to construct new and effective means by which to teach, and by adapting their instruction accordingly, students gained much more than knowledge of social studies. Students learned that a classroom community is one where their opinions are valued; students learned that when you speak others will listen and respond appropriately; students learned that not all authors are all knowing and sometimes it is not the readers' fault that comprehension doesn't occur immediately.

The journey taken by these two middle school social studies teachers as they opened their classrooms and their minds to a new approach to dealing with expository text. It began by their choosing texts that would ordinarily be taught to both seventh and eighth graders. Once teachers taught the material, they were trained in QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996). The same texts were then taught again. In reflecting on this study, it has become

apparent how important content area reading is. The processes that are involved in supporting students, as they become strategic readers are complex, demanding and ever changing. The trust component of the teacher-student relationship is at the forefront of this issue and demands that the teacher serve as instructor, facilitator, mentor, and confidante.

Implementing a *new* reading strategy required that these teachers serve as reflective, inquiring practitioners who can sustain real dialogue and seek honest feedback. They must be able to hone both their questioning strategies and pedagogical beliefs. This is demanding and requires much effort on the part of the teacher. There is some truth in the adage that teachers are life-long learners; they must continue to learn from each other and their students. Ultimately, a reward is gained, students' comprehension of text improved, their engagement with text increased, and their willingness to ask and answer questions greatly augmented. Student achievement is essentially the most important commitment we have as educators; QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) gives teachers a vehicle by which we can achieve this.

In the end, much can be learned from a study similar to this and others like it. Despite its limitations, the evidence from the present study suggests a strong connection between the intervention staff developed, QtA (Beck, McKeown, Hamilton, & Kucan, 1997; Beck, McKeown, Sandora, Kucan, & Worthy, 1996) an increase in the quality of questions asked by teachers, and an increased level of student engagement with text. Ultimately, the questions asked by the two teachers decreased in quantity and increased in quality. Teachers shifted from asking primarily retrieval of information questions to

questions that required students to construct meaning from the text. Additionally, teachers also began to extend the discussion in the classroom. Teachers began to reflect on their instruction to improve their methods for the betterment of students. Finally, student generated questions began to find a place in the classroom discourse with peer collaboration is at the heart of the classroom community. In the end, the evidence indicated that the complex process of comprehending social studies text was done more effectively because of the QtA intervention used by the two teachers.



## **APPENDICES**

## **Appendix A**

Notice of Approval: University of Pittsburgh Human Subjects Form



**University of Pittsburgh**  
***Institutional Review Board***

Exempt and Expedited Reviews

3500 Fifth Avenue  
Suite 100  
Pittsburgh, PA 15213  
Phone: 412.383.1480  
Fax: 412.383.1508

University of Pittsburgh FWA: 00006790  
University of Pittsburgh Medical Center: FWA 00006735  
Children's Hospital of Pittsburgh: FWA 00000600

TO: Mrs. Carianne Capalongo Bernadowski

FROM: Sue R. Beers, Ph.D., Vice Chair *Sue R. Beers*

DATE: December 19, 2005

PROTOCOL: The Effects of Middle School Teachers' Questioning Patterns on Learners' Outcomes

IRB Number: 0511035

The above-referenced protocol has been reviewed by the University of Pittsburgh Institutional Review Board. Based on the information provided in the IRB protocol, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section 45 CFR 46.101(b)(1).

The regulations of the University of Pittsburgh IRB require that exempt protocols be re-reviewed every three years. If you wish to continue the research after that time, a new application must be submitted.

- If any modifications are made to this project, please submit an 'exempt modification' form to the IRB.
- Please advise the IRB when your project has been completed so that it may be officially terminated in the IRB database.
- This research study may be audited by the University of Pittsburgh Research Conduct and Compliance Office.

**Approval Date:** December 19, 2005

**Expiration Date:** December 19, 2008

SRB:kh

**Appendix B**  
**Teaching Questioning Behavior Survey**

**Section I: Please complete the following questions. Write your answer on the space provided.**

1. How many years have you been teaching? \_\_\_\_\_
2. How many years have you been teaching at this particular school? \_\_\_\_\_
3. What content area(s) and grade level(s) do you currently teach? \_\_\_\_\_

**Section II: Rate the following (5 being the highest and 0 being the lowest). Circle the appropriate number and write additional comments in the space provided.**

1. When you are teaching a lesson in your content area, do you use questioning as an instructional tool?

0	1	2	3	4	5
rarely	seldom	occasionally	sometimes	often	always

Comments:

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2. When preparing for a lesson, do you plan the questions you will ask during the lesson?

0	1	2	3	4	5
rarely	seldom	occasionally	sometimes	often	always

Comments:

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3. When you are waiting for a response to a question you have asked, do you primarily call on the students who have volunteered to answer?

0 rarely      1 seldom      2 occasionally      3 sometimes      4 often      5 always

Comments:

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4. When you are waiting for a response to a question, do you primarily call on the students who have not volunteered?

0 rarely      1 seldom      2 occasionally      3 sometimes      4 often      5 always

Comments:

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**Section III: Please answer the following as thoroughly and completely as possible.**

1. After asking the class a question, estimate how long you usually wait for a response (i.e., 3 seconds).

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2. If no response is given to your question, what do you usually do next? (i.e., provide the answer)

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**Appendix C**  
**Question Tally Sheet**

<b>Retrieve Information</b>	<b>Construct Message</b>	<b>Extend Discussion</b>	<b>Check Knowledge</b>

Teacher: \_\_\_\_\_

Date of lesson: \_\_\_\_\_

Text used: \_\_\_\_\_

baseline or post intervention

## Appendix D

### Tally Sheet for Student Responses

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Topic: \_\_\_\_\_

Response Category	Tally	Total	Percentage
Incorrect/Incongruent Response (-)			
Teacher Prompted or encouragement (=)			
Correct/Congruent Response (+)			
Response cannot be classified as correct/congruent or incorrect/incongruent (X)			
Positive teacher feedback or praise (0)			

**Appendix E  
Teacher Data Sheet**

**Background Interview Questions and Responses**

<b>Interview Questions</b>	<b>Teacher 1</b>	<b>Teacher 2</b>
Total number of years teaching social studies?	Six	Three
Number of years teaching middle school?	Four	Three
Description of educational background, including graduate work, special training and/or additional staff development	Undergraduate work at California University of PA in Secondary Social Studies Education, masters in Social Sciences/ Criminal Justice also completed at California University of PA.	Undergraduate work from University of Pittsburgh in Secondary Social Studies Education, masters of arts in teaching 2001 from The University of Pittsburgh
Philosophy of education	My philosophy of education is that students should be the focus of education. Teacher roles and classroom management should all center on what is best for student learning and achievement. It is my belief that the more comfortable a student is the more willing and able he will to learn. I believe the role of an educator is multidimensional. The teacher acts as a role model, a body of knowledge, with expertise in his content area as well as in pedagogy. Perhaps, the most important role of a teacher is to provide an open, relaxed	All children have the potential to do great things, we as teachers have to help them.



	<p>atmosphere before any learning can occur. The atmosphere of the classroom should generate an increase in student self esteem and motivation. I feel that discovery learning should be used to foster a sense of community in the classroom. The students must be active participants in the learning process. Basic rules should be established to maintain order and respect. These rules should be firmly enforced and the teacher as well as the students should focus on the ideal of respect for oneself and others. My current views in all areas of education reflect this belief and with more teaching experience, I hope to strengthen and reinforce my philosophy.</p>	
<p>Knowledge of questioning strategies</p>	<p>Bloom's Taxonomy</p>	<p>Bloom's Taxonomy</p>

**Appendix F**  
**Pre-Study Interview**

<b>Interview Questions</b>	<b>Teacher 1</b>	<b>Teacher 2</b>
Estimate how often you use questions as your dominant instructional strategy	I use questions about 90% of the time.	I use questions as a dominant strategy 2 to 3 times per week generally.
Explain the reasons you use questions in your classroom	To help me better determine not only student strengths and weaknesses but also my own.	I feel it keeps thinking on different levels and gets them to focus on different angles of topics.
How do you typically determine who will answer a question in your classroom?	It depends on the level of the questioning. Once I've come to know the students' abilities a little better, I usually work through Bloom's during questioning focusing the lower end of the taxonomy toward those students who can answer correctly and will view their correct answering as motivation to continue; it builds confidence so that when they work towards application they feel they can contribute.	I select most students at random or when their hand it raised.
How do you plan questions prior to teaching a lesson?	Yes when I discuss prompts I plan those ahead of time. I try to include all students in the discussion.	Sometimes I do plan questions, but primarily I allow the kids to take the discussion where it needs to go. I may start with a general question, but the topic of discussion may lead some place else.

<p>Estimate how often you use a discussion method in your classroom.</p>	<p>Daily. I use discussion immediately at the opening of class before students begin to work on their daily prompts. The students write on their prompts for about 5-7 minutes and then we discuss and attempt to make application to daily lesson.</p>	<p>Fours times per week. I am generally discussion heavy. I have found that more people are comfortable speaking their mind in this type of forum and it also keeps more students involved in my class.</p>
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## Appendix G

### THE SOUTH PENNSYLVANIA RAILROAD

By Charles L. Ballard

Railroads had established supremacy over the existing transportation modes by the end of the Civil War. A period of unparalleled growth lay ahead. However, this period of expansion also had corruption and discrimination.

This period was also one of intense competition. At the same time, competition was ruthlessly eliminated whenever possible. There were a great many mergers of smaller lines. They merged into what later became seven or eight large railroad empires covering the United States. Each of these was presided over by its respective railroad baron. Some have called them "Robber Barons."

Once a railroad baron was established in a particular territory, another one who wanted to compete with the first one would build a purposely parallel railroad in the same territory even though it was not needed. Once the parallel line was built the competing baron would start a rate war with the first baron's railroad. A rate war meant the slashing of rates by whichever competitor started the war in order to capture traffic from the other railroad. The other line had to meet the lower rates or lose traffic. Once the lower rates were met the originator of the war would slash them further causing a downward spiral to the point where passenger and freight transportation was almost being given away and the railroads involved were seeing their losses mount.

The object of building the purposely-parallel line was for the invading railroad baron to force his line on the baron whose territory he invaded at an inflated price to stop the nuisance of the cutthroat competition. The Pennsylvania Railroad invaded the territory of the New York Central that was then headed by William H. Vanderbilt. The West Shore was chartered by 1881 to build a line on the west side of the Hudson paralleling Vanderbilt's George M. Pullman. Pullman hated Vanderbilt. Vanderbilt, it seems, would not use Pullman sleeping cars on his line. He used Wagner Palace Cars instead.

The original West Shore started at Jersey City. It has stations at Hoboken and Weehawken in New Jersey. It then before continued north into New York. It ran its first passenger train to Newburgh on June 4, 1883. By the end of the year it was running all the way through to Buffalo. Naturally, Vanderbilt retaliated. He started to build the South Pennsylvania Railroad purposely to parallel the Pennsylvania Railroad's main line between Philadelphia and Pittsburgh.

Andrew Carnegie aided Vanderbilt in his South Pennsylvania Railroad endeavor. Carnegie did not like the Pennsylvania's Railroad's monopoly in Pittsburgh. The cutthroat competition between the West Shore and Vanderbilt's New York Central

caused the West Shore to founder first. It went bankrupt in June 1884. However, the financial damage the West Shore was doing to the New York Central alarmed J. P. Morgan. J. P. Morgan was a friend of Vanderbilt's. He decided to intervene.

In July 1885 J. P. Morgan invited Roberts of the Pennsylvania and Vanderbilt of the Central to a meeting on his palatial yacht. Morgan succeeded in arranging a truce while slowly cruising the East River and Long Island Sound. In return for control of the bankrupt West Shore, Vanderbilt agreed to stop any further construction on the South Pennsylvania Railroad. It has been graded and tunneled, but no track had been laid.

Much of this unused right of way later became the Pennsylvania Turnpike including the tunnels. The size of many of those required the highway be reduced to two lanes, about the width of a double track railroad. J. P. Morgan received fees estimated at between one and three million for arranging this "deal" between Roberts and Vanderbilt.

**Appendix H**  
**Teachers' Proposed Questions to Expository Text**

Participant	Questions written for text "The South Pennsylvania Railroad" by Charles L. Ballard
Teacher 1 (T1)	<ol style="list-style-type: none"> <li>1. Why was there much corruption and discrimination during the Civil War?</li> <li>2. What is a robber baron?</li> <li>3. Why would a competing baron build his railroad parallel to the competition?</li> <li>4. What did the unused track that had been laid by Vanderbilt eventually become?</li> <li>5. What did the truce between Roberts and Vanderbilt consist of?</li> <li>6. What happened as result of most of the competition being eliminated?</li> <li>7. Why did Pullman hate Vanderbilt?</li> <li>8. What was it that Andrew Carnegie hated about Pittsburgh's railroad?</li> <li>9. What is a rate war?</li> <li>10. What vehicles are known for using railroad tracks and why did people ride trains?</li> </ol>
Teacher 2 (T2)	<ol style="list-style-type: none"> <li>1. What does retaliated mean?</li> <li>2. Summarize J. P. Morgan's "deal" with Roberts and Vanderbilt.</li> <li>3. Why do you believe J. P. Morgan intervened and arranged a truce?</li> <li>4. Whom did George Pullman hate and why?</li> <li>5. Explain how the PA Turnpike was almost a railroad.</li> <li>6. What is a railroad baron?</li> <li>7. What is a robber baron?</li> <li>8. What is a mode in paragraph one?</li> <li>9. What is meant by inflated prices?</li> <li>10. What is the result of rate wars?</li> </ol>

**Appendix I  
Staff Development Outline**

<b>Phase of Staff Development</b>	<b>Procedures</b>	<b>Duration</b>
<i>Phase 1: Rationale/Theory</i>	<p>discussion of reasons questioning is used and should be improved in the classroom</p> <p>using an audiotape of lesson, chart the types of questions asked and wait times (look for congruence of lesson objective and question appropriateness)</p>	<p><b>1 hour</b></p> <p><b>1 hour</b></p>
<i>Phase 2: Demonstration/Guided Practice/Role-Playing</i>	<p>Discussion of Queries</p> <p>Plan, teach and videotape a lesson using Queries.</p> <p>Compare quality of questions and quality of responses</p>	<p><b>30 minutes</b></p> <p><b>1.5 hours</b></p> <p><b>30 minutes</b></p>
<i>Phase 3: Debriefing/Reflection</i>	<p>Discuss how this has improved the quality of questions and the quantity of responses</p>	<b>1 hour</b>
<i>Phase 4: Coaching</i>	<p>Teach another colleague the techniques that were learned in order to improve questioning behavior.</p>	<b>On-going</b>
<p><i>* Adapted from "Teaching, Thinking Through Effective Questioning"</i> <i>Jill B. Slack (Southeast Comprehensive Assistance Center)</i></p>		<p><i>Total Time for Staff Development Workshop=</i> <b>6 hours</b></p>

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