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BEYOND THE SURFACE:  
USING STUDENT-GENERATED QUESTIONING STRATEGIES TO INCREASE CRITICAL THINKING SKILLS IN SECONDARY ENGLISH LANGUAGE ARTS STUDENTS

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This qualitative teacher-action research study examined the observed and reported experiences of teacher and students when the Question-Answer Relationship strategy was used as a bridge to student-generated questions in order to increase critical thinking skills in a tenth grade honors American Literature classroom. The study was completed in an urban high school in eastern Pennsylvania with 22 participants. Methods of data collection included student-generated questions, various types of student journals, student surveys, interviews, and classroom observations. Methods of analysis included analytic and reflective memos, narratives, coding, binning, continual review of student work, and construction of theme statements. During the course of the study, upon completion of reading a given set of chapters in an American classic novel, students posted questions on a WIKI. These questions were then analyzed according to levels of critical thinking being indicated. Additionally, students occasionally wrote journals to reflect on topics pertaining to the novel. These, too, were evaluated for evidence of critical thinking. When reading a difficult text, students needed to think critically to make meaning, and the vast majority of the students were able to pose high-level critical thinking questions of their own. Metacognition aids students’ critical thinking and enables students to transfer newly acquired
skills to new learning opportunities. The lack of background knowledge and the misreading of difficult texts may hinder the development of higher-level critical thinking skills.
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RESEARCHER STANCE

Reading Beyond the Words

I knew from the time she was about four months old that my older daughter was a go-getter. She crawled at that age, scootching herself across the rec-room floor in an attempt to get the brightly colored toy left out to lure her. She began putting together two- and three-word sentences at seventeen months, and was arguing like her three-year-old brother before she was two. Watching her grow over the next few years, I knew that she was always a step ahead – of everyone, myself included. She asked insightful questions, and pushed herself to get things right, so it was no surprise to me when her kindergarten teacher suggested she be tested for giftedness.

Over the years, watching her grow and listening to conversations she would have with her friends, especially once she reached high school, I came to wonder why she and her friends responded so differently to school than so many other children. Most of her friends were what I would call classic over-achievers, thinking that their teachers considered them “dumb” because they received a 98 on a calculus test for a silly error. I've overheard several conversations like this over the years. These adolescents held themselves to a higher standard – whether intrinsically or from parental pressure I don’t know – but they definitely set the bar high for themselves.
All this being the case, when I was asked to teach Honors American Literature and Composition in my third year of teaching, I came to the task with certain expectations for my students. For one, they would all do all their homework – always. They would do it to the best of their ability, fully, accurately, and insightfully. They would also participate in class. Surely they would be vying for my attention in order to wow me with their vast knowledge and understanding of literature. And they would all think critically, since that’s what they do – they think outside the box; they “get” the underlying message; they naturally ask the right questions.

Much to my surprise, this was not what I encountered at all. Sure, there were those few students who fit the above description. But sitting next to them, in front of them, behind them, to their right and to their left, far outnumbering them, were others who did not fit the criteria I expected. Seated there were those who came to class without having done their homework, who didn’t raise their hands to wow me with their knowledge, and worse, who didn’t think there was any meaning to the text beyond the actual words on the page. Many of these students didn’t seem to understand the concept of making inferences or of thinking critically in order to interpret the author’s message. And these students intrigued me. Although they sat in an honors class with students who were already critical thinkers, they seemed
to be stuck in a place where they couldn’t (or didn’t) look beyond the literal meaning of the words on the page. Too often, these students read the words in the text without analyzing the author’s meaning or motive. When asked a question such as “Why does a character behave that way?” they came up with answers tangential to the text, or they had strong interpretations but could not support those interpretations adequately with text. Although I warn them about my “why” factor – that they should expect to answer why they believe their statements and/or answers are true, and that their responses should be based within the text – most still fail to support their answers with text, offering up a pat: “I don’t know,” seemingly waiting for me to supply them with the right answer. But why?

In pursuing this vein of my own inquiry, I looked more closely at what else was going on in my classroom, and I noticed that, even at the honors level, many students had become experts at allowing themselves to be spoon-fed necessary information, only to regurgitate it on a test or quiz. They were largely unaccustomed to finding answers on their own or drawing their own conclusions based on inferred knowledge. This poses a problem for me, for I am a firm believer in having my students figure things out by and for themselves; by themselves to put them in charge of their own learning, and for themselves to show them that they can take charge, and that they will
retain their newly-found knowledge better when they have acquired it on their own. I wanted all my students to stop “playing school” and start being active participants in their own learning. I wanted them to master the ability to think critically, for I believe that this mastery would enable them to be life-long learners.

I believe that learning to think critically will help students discern author’s purpose/bias, especially media bias, whether in politics or newspaper, magazine, or television advertisements. It would help them to distinguish between fact and opinion, and even between fact and fiction. These higher-order thinking skills would also help them challenge ideas that were new to them in order to discover for themselves whether or not to believe those ideas. And in our age of instant information, students should be equipped to distinguish between reliable information and unreliable information, and not to believe everything they read or hear. They should understand the necessity to question the author’s purpose, again, looking for bias or any other language being used to persuade them to a certain philosophy, whether in literature, other academics, or the current culture. These are, I believe, the crucial skills that will help them not only in the classroom, but also throughout their lives, as they are bombarded with bias at almost every turn. Aside from media bias, developing higher-order
thinking can aid students in other facets of life, such as personal finance, economics, and even personal relationships, thus demonstrating the need for life-long learning.

**Interventions**

Over the years I implemented several different mini-lessons to encourage students to think more critically and to look more closely at our literature and language, but I think students saw these mini-lessons as separate and, perhaps disjointed, for few made the connections I had hoped they would. They completed the assignments or activities, but they didn’t necessarily transfer these skills to their study of literature. This realization led me to my research question. In practicing a new intervention to help students increase reading comprehension skills through Reading Apprenticeship, I came across the Question-Answer Relationship strategy. The QAR approach would help them see relationships between questions and answers, and distinguish between different types of questions to find correct responses, moving from lower to higher cognitive levels by design. Surely this strategy would help them better comprehend challenging literary texts, but I want to take this strategy a step further to increase critical thinking. I want not only to have students analyze my questions, but I also want them to formulate their own questions, moving from lower to higher levels of
thinking. In putting these two concepts together, my research question became: **What are the observed and reported experiences of teacher and students when Question-Answer Relationship is used as a bridge to student-generated questions in order to increase critical thinking skills in secondary students placed in an Honors English class?**

**LITERATURE REVIEW**

Too often, students in high school English classes fail to read critically. They read the words in the text without making inferences to author’s meaning or motive. This tendency occurs across all academic achievement levels (i.e. tracks), lower-track students and honors students alike, and may indicate a lack of critical thinking or an inability or disinclination to infer meaning or make connections (King, 1992, 1995; Raphael, 1986; Raphael & Au, 2005; Raphael & Pearson, 1985; Shaunessy, 2000). Too often students sit passively in class while teachers provide answers or information. Most students, even those at the honors level, have become experts at allowing themselves to be spoon-fed necessary information, only to regurgitate it on a test or quiz (Eckert, 2008). They are not accustomed to finding answers on their own or drawing their own conclusions based on inferred knowledge (Archbald, Glutting, & Qian, 2009; LeNoir, 1993; Raphael, 1982, 1986;
Raphael & Pearson, 1985). However, when students figure things out for themselves, they demonstrate higher-order thinking skills, taking charge of their learning, and chances are great that they will retain their newly found knowledge better when they have acquired it on their own (Boghassian, 2006; Commeyras, 1995; Miri, Ben-Chaim, & Zoller, 2007; Piaget, 1937; Powell & Kalina, 2009; University of Maryland, 2006; Wang, Woo, & Zhao, 2009).

Developing higher-order thinking skills will aid students with both critical thinking and life-long learning. Learning to think critically will help students discern author’s purpose/bias, especially media bias, whether in politics or newspaper, magazine, or television advertisements. This thinking will help them to distinguish between fact and opinion, and even between fact and fiction. Critical thinking skills will also help them challenge ideas that are new to them in order to discover for themselves whether or not to believe them; and in our age of instant information, students should be equipped to distinguish between good information and bad information, and not to believe everything they read or hear (Hacker & Dunlosky, 2003; Hervey, 2006; Hillocks, 2010; Joseph, 2010; King, 1992; Kuhn & Dean, 2004; Powell & Kalina, 2009; Smith, Rook, & Smith, 2007; Yang, Newby, & Bill, 2005). They should understand the necessity to question the author’s
purpose, again, looking for bias or any other language being used to persuade them to a certain philosophy, whether in literature, other academics, or the current culture. These are skills that will help them not only in the classroom, but also throughout their lives (Caram & Davis, 2005; Dull & Murrow, 2008; Hillocks, 2010; Joseph, 2010; Miri, Ben-Chaim & Zoller, 2007; Raphael & Au, 2005; University of Maryland, 2006; Wang, Woo, & Zhao, 2009).

The role of the effective classroom teacher, then, is to provide students with opportunities to hone their critical thinking capabilities, which in turn should lead to higher student achievement. Several strategies and methods exist to accomplish this goal, and once accomplished, the onus of learning may even shift from the teacher to the student. By mastering the ability to think critically, students of all levels should be able to identify necessary information, retaining the relevant and discarding the unnecessary (Dull & Morrow, 2008; Eckert, 2008; Hacker & Dunlosky, 2003; Hervey, 2006; Hillocks, 2010; King, 1992; Kuhn & Dean, 2004; Powell & Kalina, 2009; Shaunessy, 2000; Yang, Newby, & Bill, 2005).

Why an Honors Track?
A general misconception about students who take honors-level classes is that these students are identified as gifted or have some exceptional academic prowess. While it is true that gifted students do usually take honors-level classes, they are not the only students placed in honors classes. Often, students who work hard, follow the rules, do their homework, et cetera, are placed in honors classes as well (Archbald, Glutting, & Qian, 2009; Kilgore, 1991; Smith, 2008). Smith studied student identities in a high-track class and noted that one student justified his placement in an honors class as follows: “I’m a hard worker. That’s how I get the grade. I don’t get it because I’m smart. I try really hard’” (p. 496). This student believes that it is his hard work alone, not any innate ability, which places him in an honors track.

Still others placed in honors classes are there because of parent intervention (Archbald, Glutting, & Qian, 2009; Dauber, Alexander, & Entwisle, 1996; Smith, 2008). Smith depicts another student’s reasoning behind his placement in an honors class: “[He] indicated that he was in [her honors class] neither because of his own innate talent nor because of anything he himself had done. He was there because his mother had wanted him there” (p. 496). This suggests that the significance of being in an honors class may be more important to the parent than to the student, and a simple
phone call to a building administrator or guidance counselor can gain a child entry into an honors class. Dauber, Alexander, & Entwisle (1996) concur, stating that “parents who expect their children to attend college may intervene more in the children’s educations, even contacting the school to influence placement decisions ... prov[ing] to be important determinants of older students’ educational attainment” (p. 297). The study further notes that high parent expectations increased the probability of students’ placement in advanced-level classes during the high school years (p. 299).

Also, teacher nomination may place a student in a gifted program at the elementary level or in an honors track at middle and secondary levels (Archbald, Glutting, & Qian, 2009); Kilgore, 1991; Schroth & Helfer, 2008). Often, once placed, these students remain there throughout their academic careers (Archbald, Glutting, & Qian, 2009; Dauber, Alexander, & Entwisle, 1996). These students may not have been identified as gifted per se, but a classroom teacher sees some aptitude that impresses him or her and a recommendation is made.

The bottom line, then, is that not all students in an honors class are there because of their natural ability to meet higher standards or demonstrate higher cognitive abilities (Smith, 2008). Often the class is heterogeneously mixed across ability levels. The challenge for the classroom
teacher, then, is to bring as many students as possible to a place where they perform at similar cognitive levels (Archbald, Glutting & Qian, 2009; Kilgore, 1991) and think critically about the world around them.

Why think critically?

Critical thinking is a skill necessary for all individuals to be contributing members of a democratic society (Kuhn & Dean, 2004; Raphael & Au, 2005; University of Maryland University City, 2006). An educated, informed citizenry is able to differentiate fact from fiction, argue effectively, and hear and respect differing viewpoints (Caram & Davis, 2005; Dull & Murrow, 2008; Miri, Ben-Chaim & Zoller, 2007; Raphael & Au, 2005; Wang, Woo & Zhao, 2007). This being the case, the ability to think critically is a hallmark of a well-educated society, but what, exactly, is critical thinking?

Critical thinking is difficult to define because there are almost as many interpretations as there are interpreters. Yang, Newby & Bill (2005) claim that critical thinking “... is influenced by the level of questions asked” and that “asking thoughtful questions plays an important role in inducing students’ higher-level cognitive processes, such as self-reflection, revision, social negotiation, and conceptual change of student misconceptions, all of which are integral to critical thinking” (p. 164). These researchers believe
that when students demonstrate critical thinking, they are able to evaluate their own thinking and beliefs, making changes when and if necessary.

Several other researchers (Desautel, 2009; Joseph, 2010) echo this belief, stressing the importance of reflection on one’s learning as an indicator of critical thinking. This reflection indicates metacognition, which will be discussed more thoroughly in a subsequent section.

Weinbaum, et al. (2004) identify critical thinking in learners “using analysis, synthesis, interpretation, and evaluation” (p. 80), and Howard Gardner (1993) concurs, adding that “...particular domains of human competence seem to require their own brand of critical thinking.” Gardner explains that “the kind of thinking required to analyze a fugue is simply different from that involved in observing and categorizing different animal species, or scrutinizing a poem, or debugging a program...” (p. 44). Tying Weinbaum and Gardner, one can infer that critical thinking occurs at the higher three levels of Bloom’s (1956) Cognitive Taxonomy, and that each of Gardner’s multiple intelligences would demonstrate critical thinking differently, with criteria based on that specific intelligence.

Critical thinking has also been tied to critical literacy and interpreted to suggest that it “relates to higher-order thinking and critical reflection on text and discourse” and that its “goal is to help students achieve a higher-
level comprehension of text, to read beyond a text’s surface, and to surpass the acquisition of lower order thinking skills” (Murphy, Wilkinson, Soter, Hennessey & Alexander, 2009, para. 3). According to this definition, critical thinking is demonstrated by a deeper understanding of text, one that infers meaning rather than just accepts the words on the page at their face value (Lewis & Smith, 2001; Webster, 2004). Critical thinking is demonstrated through critical literacy, and both prove themselves greatly valuable in the classroom.

Several difficulties, however, arise in the promotion of critical thinking in the classroom. For one, critical thinking is a skill that is difficult to teach (Savage, 1998; Yang, Newby & Bill, 2005). Some researchers (Miri, Ben-Chaim & Zoller, 2007; Raphael & Pearson, 1985) claim that teachers may not know how to teach critical thinking; therefore, they are less inclined to even attempt to do so. Other research (Eckert, 2008; University of Maryland University City, 2006) indicates that students, especially at the secondary level, may not be prepared to think critically. This research suggests that students may not have the necessary scaffolding in place to support newer, higher cognitive skills, and when challenged to use these non- or under-developed skills, students fail to do so. Still other research (University of Maryland University City, 2006; Wadsworth, 1996) suggests that the ability
to think critically is a matter of maturity. According to a condensed analysis of critical thinking composed by the University of Maryland, cognitive development plays a vital role in the ability to demonstrate critical thinking, and this intellectual maturity does not always manifest itself until late adolescence or early adulthood (p. 3).

Further analysis of the concept of critical thinking indicates that not only is it difficult to teach, but it is just as difficult to assess (Paul, Elder, and Bartell, 1998; University of Maryland University City, 2006). Paul, Elder, and Bartell (1998) found that even at the post-secondary level, faculty members differ in their understanding of critical thinking indicators, some having no clear notion of how to even define critical thinking (Current Teaching Practices results section). In the same study, some faculty indicated that they believe they do, in fact, teach critical thinking, but they have no clear assessment method to validate positive results.

Fortunately, although critical thinking is somewhat difficult to teach, it is still teachable (Miri, Ben-Chaim, & Zoller, 2007; Yang, Newby, & Bill, 2005). Miri, Ben-Chaim, and Zoller (2007) found that overtly teaching critical thinking skills in the classroom does, indeed, result in increased critical thinking (p. 366). In their three-year study of high school students in Israel, they observed the teaching methods of two science teachers who claimed to
purposely teach critical thinking skills. The focus of the study was exemplary teaching methods, so no direct intervention was employed. Results illustrated by scores on two annually administered standardized tests assessing students’ dispositions and aptitudes toward critical thinking conducted as pre-, post-, and post-post tests showed that increases in critical thinking did occur when teachers directly taught toward critical thinking. Results based on teacher interviews and class observations, too, indicated that critical thinking was enhanced when teachers used specific methods such as open-ended questions and inquiry-based experiments to do so. This finding suggests that critical thinking can be taught.

An often-overlooked tie to increasing critical thinking skills in students is the development of metacognition (to be defined in a subsequent section). Researchers (Desautel, 2009; Joseph, 2010) realize that metacognitive skills prompt students to think critically, and critical thinking is indicated when a student is metacognitively aware. The problem, however, is that too often students lack either metacognitive awareness or critical thinking skills, when both are necessary (Chin, Brown, & Bruce, 2002; Desautel, 2009; Eckert, 2008; Georghiades, 2004; Joseph, 2010).

So what’s a teacher to do? The teacher’s role
What is a teacher to do? The good news is that research (Caram & Davis, 2005; Miri, Ben-Chaim, & Zoller, 2007; Smith, Rook, & Smith, 2007; Yang, Newby, & Bill, 2005) shows that critical thinking can be taught. Teachers can and should strive to develop critical thinking questions (Raphael & Pearson, 1985), especially prior to beginning a unit of study. Caram and Davis (2005) claim that “using questioning, teachers ... encourage students to think at higher cognitive levels” (p. 20). They go on to note that “teachers who ask the right questions kindle fires of critical thinking to create problem solvers” (p. 20, as cited in Hannel & Hannel, 2005). A clear indicator of critical thinking is the ability to solve problems (King, 1991; University of Maryland University City, 2006), and thus the onus is on teachers to challenge students to engage in problem-solving activities.

It seems that the focus here is on teacher preparation: the prepared teacher will foresee the types of questions that will yield critical thinking and develop her unit to attain this result. The teacher must, however, also be open to emerging questions (Caram & Davis, 2005), ones that occur as a natural part of class discussion and can bring students to a teachable moment. The use of emerging questions likewise leads to critical thinking, because students and teachers take cues from one another to clear up misconceptions, present justifications, and validate the opinions of others, all
clear indicators of critical thinking (University of Maryland University City, 2006).

Another role of the teacher is to encourage students to ask questions (Chin, Brown, & Bruce, 2002; Hervey, 2006), especially questions that will lead to inquiry and argument, which are foundational to critical thinking (Kuhn & Dean, 2004). Although few students will create higher order thinking questions on their own (Chin, Brown, & Bruce; King, 1992, 1995; Pesa & Somers, 2007), they generally will ask these questions when encouraged to do so (Chin, Brown, & Bruce; Commeyras, 1995; Hervey, 2006; LeNoir, 1993; Mills, 2009; Shaunessy, 2000; Supon & Wolf, 1993; Wilson & Smetana, 2009). When students learn to argue a position, to defend their beliefs or thoughts, even to lower cognitive level questions, they demonstrate critical thinking (Boyd & Rubin, 2006; Caram & Davis, 2005), and teachers can motivate students to this fashion of inquiry by modeling the use of higher cognitive level questions in the classroom: “The use of questioning provides an opportunity for students to engage in a process that will promote thinking, productive learning, and content retention, if done in such a manner as to stir the thought process and stimulate the imagination” (Smith, Rook, & Smith, 2007, p. 44, as cited in Vacca & Vacca, 1993). Accordingly, this stirring of the thought process and stimulation of the imagination is what
leads to higher levels of learning (Caram & Davis, 2005; Chin, Brown, & Bruce, 2002), whether initiated by the student or by the teacher.

Higher student achievement is exactly what teachers should be striving for in their classrooms. Much research (Caram & Davis, 2005; Commeyras, 1995; Supon & Wolff, 1993) exists to support the notion that when students ask questions, they demonstrate critical thinking. King (1995) agrees, stating that when students ask and answer their own questions, they address their own understanding or lack thereof, even identifying gaps or misconceptions in their learning. She further asserts that “simply formulating the thought-provoking questions, despite whether they are answered, requires students to think critically about the material” (p. 15), and the processing of this material illustrates higher levels of cognition (LeNoir, 1993). As students assimilate new material or resolve any differences to current beliefs, they not only learn to think critically, but they also construct meaning for themselves, building upon current schema. According to Wang, Woo, and Zhao (2007), “critical thinking and knowledge construction are closely related to each other. Critical thinking plays an important role in the process of knowledge construction and, [sic] knowledge construction mostly occurs as a result of critical thinking” (p. 97,

Knowledge can be constructed?

At the very heart of Piaget’s (1937) theory is the principle that learners construct their own knowledge (Boghosian, 2006; Powell & Kalina, 2009; Wang, Woo, & Zhao, 2009). In other words, when a student is confronted with some new material, theory or belief system, he weighs the new information against what he currently knows or believes, building upon his current knowledge base. In this sense, he “constructs” new knowledge atop current or past knowledge. The student is at the center of his own learning, an active participant, not a passive observer or receiver of information (Boghossian; Wang, Woo, & Zhao).

When used to foster critical thinking, constructivist thinking may not differ from thinking in a general sense (Wadsworth, 1996, p. 159). Again, when a student is faced with new, perhaps inconsistent material, this new information will either line up with or stand against a current belief. The student must then resolve a discrepancy to current thinking, if such a discrepancy emerges. To foster critical thinking in the classroom, a teacher may create such discrepancies. In her work with questioning strategies,
Alison King (1992) states: “According to constructivist theory..., deliberately raising such inconsistencies with students may lead to the emergence and resolution of cognitive conflict, resulting in increased understanding” (p. 121). In other words, the inconsistency forces the student to resolve the conflict, and he is compelled to think critically in order to do so.

King’s work (1992) with student-generated questions further supports the effectiveness of constructivist teaching methods that are in alignment with constructivist learning theory. In a two-year period she studied effective questioning strategies with both high school and college students. Her first initial study had college students listen to five class lectures, then use guided self-questioning, guided peer questioning, unguided self-questioning and unguided peer questioning strategies to gauge their comprehension of the material. (The term guided questioning refers to questions that students formulated based on generic question stems (beginnings of questions) she provided. In unguided questioning, no such question stems were provided; students relied on their own study questions.) The results, based on objective and essay tests, showed that students who participated in peer questioning in both groups (guided and unguided) out-performed those who self-questioned (p. 116). The results were similar for the study conducted with high school students. These
results reveal the argument in favor of teaching methods aligned with constructivist learning theory, specifically social constructivism, where students work together to construct their own meaning of given material. Students, working together, drew upon prior knowledge and were able to create their own questions and generate their own solutions to unfamiliar material. King states that when students frame their own questions, they may be able to address their own learning needs, such as identifying gaps in understanding or insufficient prior knowledge (p. 122).

A discrepancy seems to arise here. According to constructivist theory, students who worked alone should also have constructed their own meaning effectively in generating questions for study, yet King found that these students did not fare as well on tests as the students who worked with peers. One of the reasons she attributes to this was that the self-questioners often created questions to which they already knew the answers, whereas peer questioners needed to explain and defend their answers to one another, thus requiring higher cognitive processes (p. 116). As a result, the theory of social constructivism seems to trump independent study, but further research would be necessary for an accurate account of this phenomenon.

Herein lie several implications for the classroom teacher. Asking students questions and having them create questions that monitor their
learning and challenge their thinking are necessary components to having them shape their learning, whether these questions occur via class discussion or on a written test (Powell & Kalina, 2009). In this vein, Powell and Kalina assert that “teachers should promote dialogue of the material so that students can critically think about what they are learning. If they think critically, they will walk away with personal meaning that was constructed on their own” (Social constructivism section, para. 5). Furthermore, they will be able to retrieve this information when necessary, providing evidence that learning has taken place.

**Question-Answer Relationship: What’s the connection?**

The Question-Answer Relationship (QAR) was initially designed by Pearson and Johnson (1978) as a reading comprehension strategy to enhance students’ ability to answer comprehension-based questions, but it may also function as a method to increase critical thinking. Pearson and Johnson developed a taxonomy that regarded questions as a three-way relationship among question, text and learner. Their research reveals that understanding this relationship aids students in answering questions by distinguishing between whether the answers were explicitly stated in the text, stated in various places in the text requiring students to search for the answer, or
whether these answers required students to draw on their background knowledge. These questions are categorized as Textually Explicit (TE), Textually Implicit (TI), and Scriptally Implicit (SI), and can be loosely described as “reading the lines” in referring to TE questions, “reading between the lines” in referring to TI questions, and “reading beyond the lines” in referring to SI questions (p. 176). Pearson and Johnson found that once students were able to identify the type of question posed, they could use the appropriate cognitive skills necessary to find an appropriate response.

The original study of this strategy was conducted on university students, but the design was later redeveloped by Raphael (1982a, 1982b, 1984, 1986; Raphael & Au, 2005; Raphael & Pearson, 1985; Raphael & Wonnacott, 1981) to be appropriate in working with younger students. Raphael renamed Pearson and Johnson’s categories and added graphic representations to make them understandable for children at the elementary school level. She reclassified the Textually Explicit questions as Right There, meaning that answers could be found “right there” in the text, verbatim. She renamed Textually Implicit questions Think and Search (also known as Pulling It Together) since students needed to find answers to the question in various places in the text. And Scriptally Implicit questions she renamed On My Own, since answers could be drawn from the students’ prior knowledge.
Revisiting this technique in 1985, Raphael extended her work with the QAR to act as a tool for teachers who deal with various phases of comprehension instruction as well as a strategy for students with the addition of a fourth category, Author and Me, a subdivision of On My Own. Answers for Author and Me questions are not found in the text, nor are answers to On My Own questions. The difference lies in whether or not the text is even necessary to answer the question at hand. In Author and Me questions, the answer is not in the text, yet the student must use the text as a reference to couple with his background knowledge. The text and the student’s prior knowledge work together to answer the question. In On My Own questions, however, no knowledge of the text is necessary at all; students can answer the questions based solely on their background knowledge.

An important feature of the QAR is that although it seems that the questions are categorized or classified, it is actually the relationship between the question and its answer that is being studied (Pearson & Johnson, 1978, p. 162-163), hence the R of QAR. According to the authors, “our scheme is based upon the data source that must have been used [original emphasis] by the reader to generate that particular response” (p. 163). In other words, the student must first understand the type of question being asked before he can
effectively respond. The authors aver that these relationships can be distinguished by how they are cued in the text:

A question-answer relationship is classified as *textually explicit* if both question and answer are derivable from the text and if the relation between question and answer was explicitly cued by the language of the text... hence, a question-answer relationship is classified as *textually implicit* if both question and answer are derivable from the text but there is no logical or grammatical cue tying the question to the answer and the answer given is plausible in light of the question.

(p. 163)

Since no textual cue would be given for a scriptally implicit question, “scriptal comprehension ... occurs when a reader gives an answer that had to come from prior knowledge (it is not there in the text) to a question that is at least related to the text (that is, there would be no reason to ask the question if the text were not there)” (p. 162). Based on these definitions, the different question-types require different answering strategies.

Herein lies the tie to critical thinking: this taxonomy moves students to higher cognitive levels by its very design. Answers to lower level questions such as Textually Explicit questions fall into the lower levels of Bloom’s (1956) Cognitive Taxonomy, including knowledge, comprehension,
and application, while answers to higher level questions such as Textually Implicit and Scriptally Implicit questions require higher levels of cognition, as found in Bloom’s analysis, synthesis, and evaluation levels. However, in order to answer the questions at all, regardless of their cognitive levels, the student must first be able to differentiate between question-answer relationship types. For example, for a student to be able to categorize a question as Textually Explicit or Textually Implicit, he is already using a higher cognitive level: analysis. The very act of differentiating between question types forces critical thinking (Kinniburgh & Shaw, 2008; Raphael, 1984; Raphael & Au, 2005; Raphael & Pearson, 1985), moving students from lower to higher levels of cognition, and this movement is, indeed, what teachers should be doing; therefore, this strategy is an appropriate tool for increasing both comprehension skills and higher order thinking skills.

The QAR is a best practice that has been documented to aid students’ reading comprehension, and is especially beneficial for students tracked in lower academic achievement levels (Raphael, 1982, 1984; Raphael & Pearson, 1985; Raphael & Wonnacott, 1981). Once lower tracked students grasp the concept of how to determine question types and how to then interpret what is being asked, their ability to answer reading comprehension questions often increases in statistically significant amounts, proving itself a
best practice. Although the strategy itself benefits lower and middle academic ability tracked students most, the QAR also increases critical thinking skills of students tracked in higher academic ability levels, as demonstrated in their aptness to answer Scriptally Implicit questions easily (Raphael, 1984; Raphael & Wonnacott, 1981). In this vein, critical thinking may refer to thinking that “challenges the student to interpret, analyze, or manipulate information” (Newman, 1990, p. 44). Through this somewhat loose definition, the use of QAR can be interpreted to mean that the strategy “force[s] ... higher-order critical thinking” (Kinniburgh & Shaw, p. 19), thus making it beneficial as a tool to enhance critical thinking as well as reading comprehension.

Since the creation of the QAR and perhaps independent of its introduction have been several variations of the strategy. Dull and Morrow (2008) evaluated the effectiveness of dialogic questioning using a variation of QAR where questions were categorized as Information Gathering, Sustained Interpretive, and Values Questions. These categories are similar to Pearson and Johnson’s (1978) Textually Explicit, Textually Implicit, and Scriptally Implicit categories, respectively. Pesa and Somers (2007) also used a variant of QAR in their work studying the application and transfer of comprehension strategies. They evaluated the benefit of closed questions, open questions,
complex questions, and Socratic questions, which can be interpreted as QAR’s Right There, Think and Search, Author and Me, and On My Own questions, respectively. Both studies showed that the use of these questioning strategies does increase students’ critical thinking and helps prepare students to be life-long learners.

The QAR has also been proposed to be an effective strategy in student-generated questions. Research by Kinniburgh and Shaw (2008) suggests using student-generated questions to advance critical thinking in the Question-Answer Relationship strategy and enabling students to use these questions to quiz one another. Here again, critical thinking and reading comprehension skills increase as students create questions to fit QAR’s categories.

*Metacognition*

Focusing on strategies to improve comprehension, whether to hone critical thinking skills or comprehension itself, requires metacognition. Metacognition is often loosely defined as “thinking about thinking” (Desautel, 2009, p. 1997; Kuhn & Dean, 2004, p. 270; Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999, p. 57; Wilson & Smetana, 2004, p. 20), but other, less general definitions include the need to control and monitor one’s learning processes

Through these definitions, the terms *metacognitive knowledge* and *metacognitive awareness* surface. Metacognitive knowledge has been characterized by the learner’s view of himself as a learner (Choi, Land, & Turgeon, 2005; Desautel, 2009), and further discussed as the learner’s ability to acknowledge how he learns and when/why to use different strategies to help him learn (King, 1991; Smith, Rook, & Smith, 2007). Joseph (2010) defines metacognitive awareness similarly: “…students’ metacognitive awareness [is] the ability to reflect on their own thinking and develop and use practical problem-solving skills to resolve learning difficulties” (p. 99). Clearly, the key components of metacognition are being aware of how one thinks and learns (metacognitive awareness), and knowing how to reconcile problems one encounters in his learning (metacognitive knowledge).

In the classroom, metacognition helps develop literacy (Ciardiello, 1998; Raphael & Au, 2005) and has been proven to aid in students’ test
performance (Georghiades, 2004; Joseph, 2010; Raphael, 1986; Raphael & Pearson, 1985) on both classroom and standardized tests. Raphael and Au (2005) specifically studied the usefulness of QAR strategies on high-stakes tests, finding that most of the questions on a fourth-grade National Assessment of Educational Progress (NAEP) could be answered using QAR strategies. They found that “through QAR instruction, teachers do not need to teach to a particular test but instead are able to unpack the task demands of different types of questions and alert students to these demands as appropriate to the different tests students face” (p. 218). “Unpacking the task demands” can be implied to mean learning to differentiate between the QAR question types, and “alert[ing] students to these demands” can mean teaching them to be metacognitively aware, again promoting the argument for QAR as a metacognitive tool.

Additionally, in their work with sixth-grade students in a suburb of a large Midwestern city, Raphael and Pearson (1985) found that significant gains were made, especially with students tracked in lower academic achievement levels, when students were instructed in the use of QAR and applied metacognitive skills to distinguish between the types of questions. Fifty-nine students participating in their study were broken into instructional and control groups of students of varying academic
achievement levels (high, average and low ability-level students). The instructional group students received explicit instruction in the QAR strategy over the course of one week, and the control group received only brief instruction just prior to the test. The study found that when students are aware of what is being asked of them, those trained in metacognitive skills are better able to differentiate among types of questions and formulate the best methods to find proper responses, thus demonstrating the effectiveness of the QAR strategy itself and its effectiveness as a metacognitive tool as well.

The effectiveness of metacognitive strategies in the classroom is not limited to testing, however. Metacognition has been found to aid critical thinking as well (Desautel, 2009; Kuhn & Dean, 2004; Smith, Rook, & Smith, 2007). And once these critical thinking skills have been amply developed, King (1991, 1992, 1995) argues for the necessity of teaching metacognitive strategies to aid transfer. She believes that students who use metacognitive strategies to create critical thinking questions are more likely to transfer these skills to other learning situations. In her work using questions stems, King (1991) found that students who were trained in working with question stems in a small group setting were prompted to “create their own higher order questions” (p. 307) and this guided questioning “would function as a metacognitive strategy” (p. 308). Having previously provided her students
with cards containing question stems, she found that, even without having the question stems in front of them, students who were trained to use question stems asked twice as many [higher order] questions during problem solving activities as students who had no training in this strategy. She claims, “This difference may be an indication of strategy transfer to the novel problem and may suggest that students internalized the questions and then applied them to the new task” (p. 316). Once this internalization takes place, students should be able to transfer the skills they used in creating questions in one area to any new area they encounter. Again, metacognition seems to be the element linking the transfer of critical thinking skills to student achievement, and this ability to think critically should move students along on the road to becoming life-long learners.

In light of the research mentioned above, metacognition is a teachable strategy. As illustrated in Raphael and Pearson’s (1985) study, and echoed in a study by Wilson and Smetana (2009), with practice, metacognitive strategies can be taught and be very effective in bringing students to higher levels of thinking. Likewise, in arguing for the benefits of student-generated questions, Ciardiello (1998) states that metacognitive strategies should be explicitly taught because they have great effects on reading comprehension and critical thinking. The research clearly indicates that in order to bring
students to higher levels of achievement in the classroom, metacognitive strategies should be taught. The wise classroom teacher takes heed.

Best Practices

Student-Generated Questions

The benefits of students generating their own question abound. The philosophy that good thinkers are good questioners has been adopted by many who claim that deep learning is demonstrated by the kinds of questions we ask (Commeyras, 1995; Elder & Paul, 1998; King, 1991, 1995; Wilson & Smetana, 2009). Caram and Davis (2005) note that when students create their own questions, they have more ownership of their learning, they become more responsible for their own growth as students, and they are more motivated to learn. This parallels inquiry-based learning in philosophy, as also suggested by King (1995, p. 22-23). Research also suggests that students who create questions for their peers as well as for themselves benefit in several areas: these questions often lead students to challenge and reflect upon their own thinking, form stronger arguments to support their beliefs, consider other contexts for issues related to the text, and locate gaps in their own understanding (Chin, Brown, & Bruce, 2002; Choi, Land, & Turgeon, 2005; Commeyras, 1995; King, 1995).
Other questioning strategies include using beginnings of questions via question stems (Chin, Brown, & Bruce, 2002; King, 1991, 1992, 1995), as previously discussed in King’s studies. Questions, usually at higher cognitive levels, are begun for students, and with practice, students are then able to use these question stems to generate their own questions. King's research has shown this strategy to be very effective in advancing critical thinking skills, especially when students begin using question stems on their own. When used in small group discussions, these questions often serve to reveal a student’s confusion or comprehension problems, which in turn, makes the teacher aware of areas she may need to revisit in order to clarify or extend the lesson.

While a great deal of evidence exists depicting the positive benefits that occur when students generate their own questions, other research (Reeves-Kazelskis & Kazelskis, 1987) shows that these benefits have contingencies. Reeves-Kazelskis and Kazelskis’ study on the effects of student-generated questions on test performance conducted on 50 college students revealed that prior knowledge is a significant factor in determining positive outcomes. Their results indicate that “student-generated questions may not benefit students who are just beginning to develop schemata relating to [a specific subject matter]” (p. 10). This finding suggests that
students with limited prior knowledge on the topic may not profit from devising their own questions, since their knowledge base on the topic may be too shallow for them to generate high cognitive level questions. Activating prior knowledge seems to be a key (Bransford, 1979) for student-generated questions to be beneficial.

*Teacher-Generated Questions*

Although there is significant evidence for the impact of student-generated questions, the role of teacher-generated questions cannot be underestimated. Teachers must use questions to assess what students know. However, what types of questions and how teachers use them is of great importance to student achievement. Much research (LeNoir, 1993; Savage, 1998; Seker & Komur, 2008; Smith, Rook, & Smith, 2007; Tienken, 2009; Wilson, Grisham, & Smetana, 2009) shows that teachers will get what they ask for; in other words, the cognitive level of the teacher’s question will directly relate to the cognitive level of the answer the student gives. Therefore, teachers must be skilled in the use of questioning strategies to increase student achievement by carefully pre-planning questions (Chin, Brown, & Bruce, 2002; Elder & Paul, 1998; Kinniburgh & Shaw, 2008; Wilson, Grisham, & Smetana, 2009). Placement of these pre-planned questions is of
utmost importance in leading students to higher levels of cognition (Boyd & Rubin, 2006) and should reflect student needs (Caram & Davis, 2005). In her work with middle and high school students, Nance Joseph (2010) found that “questioning is a powerful cognitive strategy because it prompts students to focus their learning by searching for the information they want to know, helping them focus and organize their thinking” (p. 102). Other research suggests that it is not the question itself, but its contingency to questions asked previously that achieves sustained classroom discussion that leads to higher levels of cognition (Boyd & Rubin, 2006).

One area where student cognitive needs can be met deals with questioning strategies that activate schema (LeNoir, 1993). Schema can be loosely defined as a person’s knowledge base (Raphael & Wonnacott, 1981; Wadsworth, 1996). LeNoir’s review of various studies shows that when encountering a new text, pre-reading questions may activate schema, enabling higher levels of comprehension. A study conducted by Wang (2006) concurs: on a standardized test, students performed better to answers that followed a cued question than they did to answers that preceded it (p. 29). This implies that students are better able to answer questions when they know what to look for in a text.
Unfortunately, other research suggests that the use of pre-reading questions sometimes results in no significant gains in comprehension. Also in his review of the literature, LeNoir mentions a study by Frase (1967) in which results showed that “students did not internalize pre-reading questions or focus their attention to reading” (para. 9). In this study, college students were the subjects and all questions were textually explicit, meaning that answers were stated directly in the text. Although this result seemed contradictory to other research, Frase suggested that perhaps when faced with an unanswered question, students felt pressured to reread the text to find the answers, rather than focusing on seeking the answer while reading (p. 271). Despite this result in Frase’s study, more support exists in the positive outcomes of using pre-reading questions than in the negative, suggesting the strategy’s overall effectiveness (Raphael & Wonnacott, 1981, Wadsworth, 1996; Wang, 2006).

Summary

An old Hebrew proverb states, “A cord of three strands is not quickly broken” (Ecclesiastes 4:12). While this saying usually refers to relationships between people, it may also be interpreted to suggest relationships between concepts. The concepts of critical thinking, metacognition, and questioning
strategies are so closely intertwined that the speculation of their effectiveness in the classroom is obvious. Once students master the metacognitive strategies used to aid their critical thinking, they should be better able to differentiate between types of questions and formulate their own high level questions accordingly. This being the case, the argument for teaching critical thinking skills using the QAR as a bridge to student-generated questions should yield lasting results in leading students to greater achievement in the classroom and, perhaps, in life.

RESEARCH DESIGN AND METHODOLOGY

“Plans fail for lack of counsel; but with many advisers, they succeed.”
Proverbs 15:22

Research Goals

My primary goal in conducting this action research study was to increase the critical thinking skills in my students. I wanted my students to realize that there is more to literature of any kind than just the words on the page. Understanding fully well that there are some students, especially at the honors level, for whom this type of thinking is intuitive, I wanted to bring all my honors students to a high level of response. I wanted them to look beyond the words on the page to any underlying message, even any
connotation a certain word may have left. I believed that by teaching my students to ask questions of the text, even vicariously of the author, they would learn to challenge the text, which would, in turn, enable them to critically think about the text and its significance or relevance to their lives and the world around them, thus enabling them to become life-long learners.

A secondary goal in using the two interventions I chose was to help students distinguish between the types of information questions seek. I wanted them to understand the difference between questions that require close analysis of the text, questions that draw on background knowledge, and questions that ask them to speculate on the text’s connection to life. I believed that this ability could help students differentiate between the different types information being sought on standardized tests such as the PSSA and the SAT, where answers to reading passages are often elusive. And I believed that this ability to differentiate between questions could help students achieve higher scores on these high-stakes tests. Being able to kill two proverbial birds with one stone was an added benefit to choosing a research topic that teaches students to ask questions as well as determine specifically what type of information is being sought in answers.
Setting and Participants

My school district is located in the northeastern United States. The district has one high school, one middle school, and seven elementary schools. The student population in the district is approximately 9,200, with approximately 31% economically disadvantaged. I teach three levels of 10th grade English Literature and Composition at the high school: honors, college preparatory, and academic. The school’s population consists of approximately 2,900 students. Of these, 64% are of Caucasian ethnicity, 19% Black, 14% Hispanic, and 3% Asian. Approximately 25% of our students qualify for free or reduced lunch. The Pennsylvania Department of Education Academic Achievement Report indicates that in 2010 58.8% of our students scored proficient or above in Reading on the PSSA test, demonstrating a 4.2% deficit in proficiency but allowing us to reach Safe Harbor and categorizing the school in Corrective Action II 4th Year.

I conducted my study within one of my three honors level classes, consisting of twenty-three students: nineteen girls and four boys. Twenty-two students chose to participate in the study. I wanted to have a focus group of students to interview and serve as a panel in order to “help me understand the data from the class as a whole” (MacLean & Mohr, 1999, p. 53), so for my focus group, I chose six students: five females and one male.
In order to maintain the diversity of the general student body, I chose students of various ethnicities for this group: four Caucasian students, one Black, and one Hispanic. Since I also wanted to demonstrate the varying range of student ability levels in this class, I chose several students for whom this was the first honors level class they had taken (one Caucasian female, one Black female and one Hispanic female), a (female) student with an IEP, and a (male) student with a GIEP.

Data Gathering Methods

“Wise men store up knowledge...”
Proverbs 10-14

Student Artifacts

Most of the data I collected was in the form of student artifacts. According to Hendricks (2006), “...artifacts can be used for formative assessment, which occurs during the instructional process to monitor the effectiveness or instruction or intervention” (p. 82). Since I wanted to monitor the level of critical thinking demonstrated by my students’ questions, for each chapter of *The Scarlet Letter* I assigned I asked students to post two questions per chapter on a WIKI I had set up for this unit. We used these questions to spur classroom discussion, and I later categorized them
according to indicators of critical thinking as suggested by Bloom's Taxonomy (1956) and Dalton & Smith (1986, p. 36-37).

I also collected student responses in journals where I looked for indications of critical thinking, and in “metalogs,” another form of journal, where I looked for evidence of metacognition. These, too, I coded according to a compiled list of critical thinking indicators.

Field Notes

One of the most useful types of qualitative data I collected was my field notebook. Here I jotted down the mood of the class, what students literally said (mainly what questions they asked) each day, and any other noteworthy goings-on in the class that day (e.g. how excited or confused students were after that particular reading assignment); literally, “just [writing] what I [saw]” (Johnson, 2008, p. 83). I also coded these in-class questions and compared them to questions that particular students posted on the WIKI to compare the relevance of the question to the student's critical analysis of the material.

After class I would “record my own thoughts and feelings” about what I saw, following the advice of Bogdan & Biklen (2003) about observer's comments (p. 151). This enabled me to speculate on what went on in class
that day and its relevance and/or connection to my research question.

Understanding that “observations are not complete... without reflection” (MacLean and Mohr, 1999, p. 28), I tried to reflect upon the day’s activities as soon as possible via memos in my field notebook. Here I speculated about what students seemed to “get,” possible indicators of critical thinking, and where students seemed to get lost. In these reflective memos, I tried to “focus on the ways [these classroom] experiences and values [could or should] affect [my] actions” (Hendricks, 2009, p. 30). Following Bogdan and Biklen’s “do not be afraid to speculate” advice, (p. 159), it is in these memos where I pondered what I was seeing, what this indicated, and what adjustments I needed to make.

**Student Surveys**

During the course of my study, I conducted three surveys: a general pre-study survey (Appendix A), a more text-specific mid-study survey (Appendix B), and a strategy-specific post-study survey (Appendix C), in which I analyzed students’ attitudes about their ability to comprehend difficult texts, their use of reading strategies during *The Scarlet Letter* unit, and their thoughts regarding the general usefulness of the interventions throughout the unit. I had originally planned on only conducting a pre- and
post-reading survey, but as the study progressed, I realized that in order to keep student questions aligned with my evolving line of inquiry (Hendricks, 2009, p. 104) and to confirm my emerging hypothesis, I would need more specific information from the students.

These surveys were designed with both open-ended items and closed-response items on an attitude scale (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). My reason for choosing this type of survey was two-fold: to show me students’ attitudes about the interventions and their success, as well as to give me some quantitative data for comparing usefulness of the strategies, as suggested by Johnson (2008, p. 96).

Student Interviews

In order to obtain an overview of my students’ interpretations and the effectiveness of the interventions I used in this study, I conducted student interviews (Appendix G). Gubrium & Holstein (2002) suggest that interviewing students “allows them to give voice to their own interpretations and thoughts rather than rely solely on our adult interpretations” of students’ meaning (p. 181). In the interest of time (it was almost impossible to interview all the students in one sitting because of their various extra-curricular activities and outside of school schedules), I conducted interviews
only with students in my focus group. I interviewed two students at a time for 10-15 minutes after school on three separate occasions. The interviews took place in our classroom with three desks arranged in a circle. I took great care to listen for what Seidman (1998) called the “inner voice” of the student (p. 63) in order to deeply interpret what each student said during the interview. Also, fully understanding the tendency for students to “please [the teacher] by saying what they think the teacher wants to hear” (MacLean & Mohr, 1999, p. 45), I asked for clarification often, especially when a student’s choice of words may have felt ambiguous to me. All the questions were open-ended, and I followed Seidman’s advice by asking “real questions, one[s] to which the interviewer does not already know or anticipate the response” (p. 69). As the students spoke, I jotted down important notes, followed up with more specific questions, when necessary, and generally listened for information that would “shed light on [my] research as a whole” (MacLean & Mohr, 1999, p. 45).

Research Log
My research log holds all my data: student interviews, surveys, artifacts, journals and metalogs; along with my reflections, observations, and notes. It is categorized alphabetically by type of data for easy reference.

**Trustworthiness Statement**

Conducting teacher action research requires great care in maintaining trustworthiness, validity, and credibility. As part of this process, I implemented several measures to ensure ethical procedures, methods and documentation.

First, I obtained the written consent and approval to conduct my study from Moravian College’s Human Subject Internal Review Board (Appendix D). In addition, I have written approval from my building principal (Appendix E). I also distributed a letter of consent to my students’ parents or legal guardians (Appendix F) and discussed the study with my students. I informed them, verbally and in writing, of the benefits of my study, and made clear that participation was on a voluntary basis with no penalty for non-participation; I also informed them that students might withdraw from the study at any time without penalty. In the letter, I informed the parents that all the data collected would be kept in a secure
location in my home and destroyed at the conclusion of the study. I explained that I would assign each participant a pseudonym to maintain confidentiality and anonymity, as well.

Prior to the beginning of the study, I conducted a review of the literature. According to Hendricks (2009), “reviewing the literature is important ... to learn what is already known about the topic” (p. 37), thus, essentially, providing a historical framework for the reason for and direction of the study. Hendricks further stated that “in reviewing related literature one can learn about other researchers’ (both practitioners’ and university researchers’) successes and failures using various interventions, which can help identify useful practices that can be incorporated into the study plan” (p. 37). While conducting my review of the literature, I was able to determine possible directions the study may take, potential pitfalls to avoid, and other factors that could determine the outcome of my interventions, thus enabling me to draw upon best practices to guide my study.

Also, in following Lincoln and Guba’s trustworthiness criteria (as quoted in Hendricks, 2009), I devised this study to be able to be replicated in other scenarios and with other students. I attempted to design the intervention so that it might be utilized in any of the secondary core content areas, thus demonstrating its transferability and consistency (p. 113).
In order to maintain validity, I looked at my methods and data from different perspectives: that of each of my students, my own, and that of a friend serving as a peer reviewer.

My students gave me their feedback through their responses on surveys and interviews, thus giving them a voice in my study. By allowing them this voice, they in essence became co-researchers in my study. Their class work, too, especially in the formulation of their questions, provided me with both quantitative and qualitative data to ensure a trustworthy study.

I documented my perceptions in my field notebook. During the course of the day, I jotted down quick notes on what I observed, and then later I provided an explanation or expansion of what I believed I was seeing. My field log contains information about what went on in my class daily, including a detailed description of the setting, students involved, and methods used (Hendricks, 2009), thus connecting what I saw to why it might have been happening, being sure to include any aberrations.

As mentioned above, I also had a peer to serve as an outside observer (critical friend) in my study (Hendricks, 2009). Feedback from this friend, especially since she, too was conducting teacher action research, helped me to maintain focus in my study and to ponder the significance of what I was
observing in my classroom. Having another set of eyes looking at my data surely added both trustworthiness and credibility to my study.

Lastly, I believe I have achieved triangulation between the sources mentioned above and my data/methods. My data sources were information I collected using student surveys and interviews, student artifacts, and my own field notes. My methods of collection were pre-, mid-, post-, and post-post study surveys, student interviews, student journals and metalogs, student questions (both prior to coding and after), and my field notebook. These various forms of data and methods of triangulation allowed me to see the effects of my intervention on student achievement from different perspectives and without subjectivity (Johnson, 2008).

**THIS YEAR’S STORY**

Even in my sixth year of teaching, with three levels of students and six periods to teach in two different rooms, I wasn’t sure if excitement would trump how overwhelmed I still felt on the first day of school. With oodles of paperwork to hand out – class rules, folders, supply lists, medical information sheets … not to mention assigning seats and trying to set the tone of the class by giving the students a Warm-up quote to respond to as a Quick Write – introducing and explaining a master’s degree action research
project to my three honors classes almost seemed like just another thing to do, however necessary it might be. Trying not to lose this introduction in the swarm of other activities, after allowing my students to discuss the quote about learning, and distributing and reading my classroom rules and procedures, I excitedly told them about my project and invited them to be my co-researchers. As I looked around the room trying to read faces I had only just met, I felt intimidated and a little nervous – would they buy in? Would they think the project was stupid? Would they even show their parents the required letter of consent? These are issues I knew I had to consider when dealing with high school students. However, I had one thing in my corner: these were honors students who usually aim to please. Of the 67 students I invited to participate (I hadn’t chosen a focus class yet), 59 agreed, giving me what I hoped would be a strong participant base for my research.

The second day of school proved to be very much like the first, with much business to attend to. There were still books and computer log-ins to be distributed, and an early writing assignment and a survey to be completed (Appendix A). I wanted to know early on how my students felt about themselves as learners. Did they like to read? Did they consider themselves strong readers? In which areas did they struggle: comprehension, making inferences, vocabulary? How, if at all, did they self-regulate these areas of
weakness? All of these data would certainly help me understand who my learners were and identify areas of need for me to focus on during the rest of the year. And I planned to use these data for comparative purposes at the end of my study to assess the effectiveness of the strategies I implemented, noting changes in my students’ perceptions of themselves as learners.

*The Wrench*

My past experience as a high school teacher had shown me that even students in higher-level classes often lacked critical thinking skills – many of them just didn’t seem to read beyond the words on the page. Many of them failed to make inferences, or understand the need to do so. I went into this school year hoping to bring my students to the place where they looked more deeply into an author’s purpose for writing, his message, his word choice, and how these decisions shaped the overall outcome of his work. I thought that if students were aware of these decisions, they would be more apt to make critical judgments about literature, and I hoped these insights would carry into other areas of their lives, whether academic or personal. Since the most complex work we would be studying this year was Nathaniel Hawthorne’s *The Scarlet Letter*, I thought this would be the best piece to use
to teach my students questioning strategies and observe their critical thinking abilities along the way. Also, since this was a work with which I was very familiar (I’ve probably read the book nearly 20 times by now), I thought this was an area where I could easily help them make the inferences necessary to make meaning of a difficult text. I knew I would have to start slowly, providing much scaffolding on the strategies prior to the beginning of the unit, but I was ready. Everything was in place – the surveys, preliminary interview questions, and assessments were drawn; the places I’d begin the intervention were set; the journals, Quick Writes, Metalog topics, and activities were scheduled; the WIKI was set up; the previous lesson plans I thought I’d follow were revised… I was ready. This would, no doubt, be a busy year.

Before the year began, however, our school board made some difficult decisions, one of which cut six teachers from my department, leaving us, the remaining teachers, with more students and more classes to teach. For me, this also meant another preparation: in addition to the three honors classes and two academic classes I had taught in the past, I would now also be teaching a college preparatory class. The content of this sixth class wasn’t new for me – I had, by choice, had three preps in the past. And I had taught college preparatory students before as well. But when I took on a third
honors class two years ago, I gave up the elective I had taught to allow myself the much needed time to respond to and assess my honors students’ work. I believed this would be in the best interest of all. So another prep, with new lesson plans and new assessments to create, a prep which I hadn’t taught in four years and prior to a newly adopted curriculum, added to what was already a schedule with a heavy grading load, left me quite nervous about putting the necessary time into all that was being asked. I’m somewhat of a perfectionist, and although I don’t meet the mark as often as I’d like, I feared that this year would have me running around like a lunatic with none of my classes getting 100% of me. I spoke with my department chair about my fears, but the schedule was set. “You’ll be fine,” he said. So, not being one to stir the pot too much, I let it go, hoping that I would, indeed, “be fine.”

Additionally, I would now be teaching in two different rooms, something I hadn’t done in three years. I remembered the days of going from room-to-room, and the stress of making sure I had all the supplies I needed in each room… so I wasn’t anxious to relive that situation. And with one of my honors classes in one room and two in another, and a master’s degree project I wanted to end successfully, I feared I was in over my head. This would, no doubt, be a really busy year.
Get Ready

About two weeks into the school year, I was ready to begin my project. Since my school had adopted the Reading Apprenticeship (RA) intervention to help our students with their reading comprehension and analytical skills, I first asked my students which RA strategies they were already familiar with: Talking to the Text, Think-Pair-Share, 25-Word Summary, Question-Answer Relationship (QAR), to name a few. Some expressed a recollection of the terminology but couldn’t elaborate further; others had no idea what I was talking about. This worked to my advantage, since I wanted to introduce the QAR with the original categories, not the ones adopted by RA. I felt it would be best to introduce the intervention with a unit of literature, so I began with our study of Anne Bradstreet’s “Here Follow Some Verses upon the Burning of Our House.” I thought that this relatively short poem would be the perfect place to introduce the strategy with its RA terms to jog the memories of students who had had some exposure to it, and then convert the terms to their original state to demonstrate their original intent. After we read the poem and studied the literary techniques and content, I modeled how we could use QAR in the study of this poem, using a Power Point presentation (Figure 1), where I first defined the categories as in RA, modeled how they might be used in
Bradstreet’s poem, allowed students to answer them as intended by the strategy, then reclassified the categories, asking students to classify new questions according to the new categories. Lastly, I asked students to work with a partner to generate their own questions, one for each category to be shared with the class.

As I circulated the room to see how students were doing, Leah, a student in my seventh period class, asked, “What’s the point of this?” Her friends’ reaction showed me they were shocked at her candor, but I tried to assuage their disbelief. Sensing Leah’s skepticism, I explained that it’s a reading comprehension strategy that requires you to think critically to find answers to all different types of questions. I further explained that I believed this strategy could help students on the SAT, helping to differentiate between the different types of information being sought. I don’t think my response squelched her skepticism, but it at least pacified her, and she continued working.

As I continued circulating the room, some students groaned, “This is hard!”

“It’s a little tricky, but you’ll get it,” I encouraged. I noticed that many were having trouble with the two middle categories, Textually
Figure 1. QAR Explanation. This figure illustrates how QAR was used while teaching Bradstreet’s “Upon the Burning of Our House.”
Implicit (TI), where the answer should be found in various places in the text, and Scriptally Implicit (SI), where answers should couple background knowledge with the text. This problem was pervasive, occurring in each of my three honors classes. Each time I noticed the problem surfacing, I addressed the class, rephrasing what constituted each of the more difficult categories, and used *Romeo and Juliet*, which I knew they had all studied as freshmen, as a model to formulate questions in the TI and SI categories, stressing the differences. This seemed to help more students, but I could see that others were still struggling, so I encouraged the students to keep at it and offered support where I could, often reclassifying their questions to show them where they had strayed.

At this point I began wondering if I had made a mistake choosing this line of inquiry for my research project. If the kids already hated this strategy and saw no point to it, I wondered if it would be even remotely effective. Would this strategy help their critical thinking skills, or their criticizing skills? I felt defeated... already... and just days into my study. “It’s too late to try something else,” I thought, “and it’s too early to throw in the towel, so what do I do?” Fortunately, later that day, I was given a glimmer of hope.

I had not yet decided upon which of my three honors classes I would focus, so all student input was available at this point. It was during my last
class that a group of three students shared their TI question: “How does the
speaker’s attitude change throughout the poem?” This question
demonstrated to me the effectiveness of student-generated questions,
because just the formulation of such a question indicates critical thinking. In
posing a question of this nature, I could see that not only did the students
understand the process of question generation, but they also understood the
poem, which is essentially what literary analysis is – understanding a work
on multiple levels. This one shining moment defeated my self-defeat, and it
kept me going, muddling my way through my first crack at teacher action
research.

In hindsight, I should have had students do a Quick Write on their
feelings about QAR at this point, but being a novice teacher-researcher, and
having designed the study more for our *The Scarlet Letter* unit, I only had
them verbally share their questions, and I wasn’t initially concerned about
their hesitations or problems in questioning, understanding that adolescents,
like adults, are often resistant to anything new. I also didn’t concern myself
with any problems initially because I knew we would be practicing more in
our next reading, Jonathan Edwards’ “Sinners in the Hands of an Angry God,”
which we would begin the following week. I did, however, make a “note to
self” – do a Metalog or Quick Write on how easy/hard it is to create questions in the different categories – which I did.

Get Set

About a week later, I assigned the Edwards piece for homework one night. Students were to read and annotate the sermon and be ready to discuss it in class. The following day, I reviewed the QAR categories and distributed a handout (Appendix H) with four questions on the top half of the page, and four sets of lines on the bottom half. The questions on the top half pertained to the content of the sermon and had already been categorized according to their respective QARs; the bottom half had room for the students to formulate their own questions. This time, I planned to have students respond to a Quick Write about the questioning process upon completion of the QAR activity.

I instructed students to answer the questions on the top first and to await further instructions. I had students work alone on this. Since these questions were content-based and had already been categorized, we discussed the answers as we normally would, not focusing on the QAR. I did, however, make a point of alerting students that the first two questions were TI, that there were no Textually Explicit (where the answer could be found in
the text verbatim) questions. A few said they had caught that; many
expressed that they didn’t even notice.

After our discussion of the questions, I had students create four of
their own questions as I had before, one for each of the QAR categories. This
time, however, I instructed students to either formulate questions that would
aid their own comprehension or (as an ulterior motive) ones they deemed
appropriate for a test or quiz. As we shared the questions they had created, I
saw that most of the students formed questions accurately for each category.
My third period class in particular seemed excited to do so, and even the
students who still had misplaced questions were quickly able to make
corrections. Neither of the other classes showed such emotion, again forcing
me to question the overall effectiveness of the strategy.

My Quick Write asked the students: How easy/difficult was it to
generate questions in the different categories? Why do you think this is so? As
an afterthought, I had them respond to the following question on the back of
the Quick Write sheet: When answering my questions, did having the category
help you find the answer? The answers here surprised me. Focusing only on
responses from my seventh period class (who would become my focus class),
of the nineteen students who responded, ten said generating questions was
difficult, two of whom added “especially SI;” five said it was easy, one of
whom added a caveat, “except SI;” and four responded with non-committal answers. When I asked for oral responses explaining their position, one student stated, “We usually answer the questions – it’s weird to ask them!” Several others agreed.

Here, a light bulb of sorts illumined for me. Students do not often perceive themselves as the ones who should be asking the questions. In their experience, the teacher asks, and the student answers. Questioning or challenging either the teacher or the text, I speculated, only occurs when a problem arises, and only if the student feels comfortable enough to seek additional information. This little piece of information was vital to me. Perhaps this is why students don’t read beyond the words on the page – they’ve become so accustomed to teachers asking questions pertaining to relevant information that they do not see the need to look for relevant information themselves; as if only the teacher knows what the important questions are or should be; as if the student’s mindset is that, if the teacher thinks it’s important enough to ask about, she will; if not, the information must (or may) not be important. This showed me clearly that students needed to get in the habit of asking questions of the text to aid their own understanding of it. It was becoming more obvious to me that this could be the heart of critical thinking – challenging the text to discover vital
information, challenging even the teacher if she doesn’t ask information that seems vital to the student.

_And Away We Go_

During our study of _The Scarlet Letter_, which began the next week, my students had much to do. In addition to reading assignments (most of the reading would be homework, with about three chapters due every other day or so), students were to post questions on a WIKI I had set up for this unit. On this WIKI, I set up a place for each period to post questions they had during the reading of each set of chapters. Students were to post two questions per chapter in three chapter segments – essentially, six questions per reading assignment. In addition to the questions they posted, students could check their comprehension of each chapter by visiting questions I posted on another page of the WIKI (Appendix I). Here, students could (and were advised to) monitor their comprehension as well as realize the important points in each chapter through their ability to answer the questions posted. Each of the first four chapters contained questions that I had already categorized according to their QAR categories to help students locate answers in what I knew was a difficult text for them. The following
eight chapters contained only some categorized questions, and I provided no QAR categories for questions regarding the last twelve chapters.

The reason I began removing QAR categories was to encourage students to read closely enough to answer at least basic comprehension questions on their own. I believed that part of making meaning of The Scarlet Letter was adjusting to Hawthorne’s complex writing style, and once students became accustomed to that style, their comprehension would increase. I had also advised them, if worse came to worst, to just try to find the subject and verb of each sentence. This alone, should help them get through the lengthy sentences Hawthorne loves to use. Also, since nowhere outside of my class would questions be categorized by QAR, I wanted to remove the crutch, little by little, allowing students to make meaning of the text on their own.

I began the unit with an Anticipation Guide, having students respond to some of the issues that would emerge in the novel, along with a biography of Nathaniel Hawthorne. Prior to this, though, as an introduction to understanding complex literary pieces, I had students complete a journal: To me, literature is like…. I had students share their responses, and I shared my own. Here, I referred to a poster of an iceberg I have on the wall. On this poster, called “Hidden Depths,” an iceberg is shown both above and beneath
the surface of the water. The poster illustrates that what you see on the surface of the water is just a small portion of what’s underneath – that there’s a huge ice mass under the water, multiple times larger that what the eye sees floating on the surface. I explained to them that to me, literature is like that iceberg. The words on the page are what sit on the surface of the water, what the eye sees; but the real depth of the piece is what lies underneath those words, beyond them, and this is where the real message is.

To further illustrate this point, we looked at a series of four transparencies. Each transparency had a picture of two animal tracks approaching one another from different directions. One set of tracks indicated an animal much larger than the other, and each transparency showed the animals getting closer, until the third transparency, where they appear to have met and circled one another, even stepping on one another. The final transparency showed only one set of tracks remaining. After viewing all the transparencies, I instructed students to come up with a scenario for what may have taken place in the series of tracks. They worked in groups for this activity. Since in one of the tracks there appeared to be some sort of scuffle (many tracks placed randomly, even overlapping one another), students generally concluded that a large animal and a small animal had somehow gotten into a fight and the large animal won. I then
shifted their perspectives: “What would you say if I told you that this is a fossil? That each set of tracks appeared at a different point in time and created the layers we see now?” I've used this activity in the past, and this scenario usually bewilders students, but they do see the potential truth in the situation. I went on to say that literature is much like this scenario, that there are layers of meaning that we need to dig through to get to the real story. Again, I used this activity as a scaffold to illustrate the need to look beyond the words on the page to draw out the deeper meaning an author may have and to draw on inferential information when necessary. My hope was that students would begin to get a clear indication of purposeful reading and the need to closely read any piece of literature to understand what might be the hidden message. I used all these activities to demonstrate that there is more to literature than what the eyes see.

Once we were ready to begin the novel, I read the first two chapters aloud as an introduction to Hawthorne’s style. I also modeled some examples of questions I hoped students would form, coded according to the QAR protocol. I told them that this was the level of questioning for which I wanted them to strive; and I assured them that we weren't all there yet, that no question was stupid, and that if they had a question, chances were great that someone else had the same question. Since so many of them seemed lost
just after hearing the first two chapters, I assigned only one chapter to be read for homework and had them formulate two questions for each of the first three chapters, even the ones we read together. I wanted them to gain some confidence in posing questions, so I allowed questions even on the chapters we had already discussed. I also instructed them to be ready to post their questions on the WIKI by the next reading assignment, which would be Chapters 4-6.

Moving Along

A few days later, I began class with an Admit Slip on keeping a secret to spur the discussion of Chapters 7-9 of *The Scarlet Letter*, where the reader infers that one of the main characters, Reverend Dimmesdale, is quite physically ill due to a well-hidden, deep, dark secret. Figure 2 illustrates a pastiche of questions students posted on the WIKI pertaining to this issue prior to our class discussion. Ten of fifteen students posted specific questions on this topic, indicating various levels of critical thinking. Since Dimmesdale’s illness came up so often in the students’ WIKI questions, I felt the Admit Slip would be a good springboard into discussion.

After the students had some time to complete their Admit Slips, I asked, “So, can keeping a secret really make someone physically ill?”
Figure 2. Pastiche of WIKI questions on Dimmesdale’s health.
“I lied to my parents about dating,” Shona shared. “I felt kinda sick about it in the beginning, but you kinda get immune after...”

“When I hold it in, it just makes me sad,” Teal added.

“Ahh, like Dimmesdale...” I thought to myself. “Melancholy... good connection!”

Patrick jumped in, “I don’t think they’re directly related. Like in the book, it’s like... creative liberty... Hawthorne does it to amplify Dimmesdale’s guilt.”

“Great... connection to the text!” I thought to myself as I jotted down his comment.

“I don’t think it can make you physically ill, but mentally, maybe...” Julie added.

“Yeah, I agree...” said Robert. “Mentally ill, but that can lead to physical illness...”

“How?” I asked.

“Like you get fatigued... you’re constantly worrying... it’s like a mindset...”

“... like butterflies...” Shona stated, holding her stomach.

“I agree with them,” interjected Laura, “but it also depends on what the secret is – like what the situation is to run you down... or make you paranoid...”

“Karma...” Logan suggested.
“Karma???” I thought. “I think I get it, but I’ll have to come back to him... four others are already talking...”

“It might make you physically sick...” Bobbi added, “like the stress...it hurts you... like harms you physically...”

“I agree with them...” Pilar jumped in. “It can make you sick, physically... you stop eating, lose sleep...”

“...and the guilt...” Shona added.

“Guilt?” I asked. “Of the secret?”

“...of you not standing up if you did it with someone else...” she continued.

“Yeah,” Pilar interjected, “and fear, like if there’s a severe punishment...”

“Great segue... time to jump in...” I thought to myself. So I asked, “Like with Dimmesdale?”

Here I was so pleased to see students make so many excellent connections to the text. Even though students weren’t necessarily commenting directly on the content of the story, every comment shared both their comprehension of the text and their ability to demonstrate analysis of a real life situation, which indicated to me a high level of critical thinking.
Early Peeks

Since I had previously instructed students to post their questions on the WIKI the evening before the next class so I could print them and read through them during my preparation period, which was early in the day and before I taught any classes, I was able to see what the students were thinking and wondering. This enabled me to get an idea of where to channel the daily discussions based on their questions, and to do some preliminary coding, looking for evidence of critical thinking as I believed would be indicated in their questions. Figure 3 illustrates samples of student questions with my coding in the margins. Figure 4 shows my preliminary coding index.

In Figure 3, the codes in green on the left were the ones I initially used to categorize the students’ questions as per the QAR protocol. “TI” stood for “Textually Implicit,” where the answer needed to be pulled from several places in the text, and “SI” stood for “Scriptally Implicit,” which required students to make connections to the text based on prior knowledge. Both of these categories required students to rely on high-level thinking skills.

The codes on the right in Figure 3, most of which appear in red, indicate more specific information I believed each question gave me about the student’s thinking. For example, the very first question listed for Chapter 13 says, “Would Hester have been as good and helpful as she is now, if she
Chapter 13
1. Would Hester have been as good and helpful as she is now, if she had
never faced the hardship of wearing the scarlet letter?
2. Despite being kind to the poor, helpful to the sick, and comfortable to the
afflicted, why does the narrator later say that Hester has become a “bare and
narrow outline, which might have been repellent, had she possessed friends or
companions to be repelled by it?”

Chapter 14
1. If given the chance (and by that, I mean, if it was socially acceptable),
would Hester leave Chillingworth to be with Dimmesdale (if, he, too, wanted to
be with her)?
2. What is Chillingworth implying when he says, “It is our fate. Let the Black
Flower blossom as it may?”

Chapter 15
1. Hester hates Chillingworth, claiming that he had betrayed her; hadn’t she
betrayed him by committing adultery?
2. Did Pearl’s persistence in asking about the relation between the scarlet
letter and the minister’s heart make Hester feel even more guilty for
Chillingworth’s torture towards Dimmesdale?

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Figure 3. Examples of coded student questions.
had never faced the hardship of wearing the scarlet letter?” I coded this question as “EXT,” which stands for “extension,” a high level of critical thinking indicated by speculating on how Hester’s character may have been different. This student shows that he is trying to understand Hester’s character on a deeper level, surmising how a person might respond differently under different circumstances. Since I believed this type of speculation demonstrated high-level critical thinking, I also coded it “RSPEC,” which stands for “speculation pertaining to real life.” I continued this pattern of analysis, often having two or three codes per question, trying to assess what each student indicated by the language he or she used in each question posted and how each question demonstrated critical thinking.

The Preliminary Coding Index itself (Figure 4) enabled me to keep track of the different indications of critical thinking I saw. Since the writer’s voice of each student varied so greatly, I ended up with many codes, but further analysis of the codes themselves showed me that several of them could be cross-referenced to other codes indicating the same type of critical thinking; in other words, several codes were related and fell under the same critical thinking indicator. For example, upon further study, I realized that “ANAL,” my initial code for “analysis” was related to other codes I established
**Cross-Referenced Coding Index**

<table>
<thead>
<tr>
<th>CODE/ABBREVIATION</th>
<th>RELATED CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN = answer needed</td>
<td>AP; CA; CR/DR; DA; LT</td>
</tr>
<tr>
<td>ANAL = analysis</td>
<td>MIS; PSPECa</td>
</tr>
<tr>
<td>AP = author’s purpose</td>
<td>ANAL; CR/DR; DA</td>
</tr>
<tr>
<td>BK/BGK = lack of background knowledge</td>
<td>META</td>
</tr>
<tr>
<td>CA = character analysis</td>
<td>COMP; META; REC; ChU; COMP</td>
</tr>
<tr>
<td>ChT = change/challenge to current thinking</td>
<td></td>
</tr>
<tr>
<td>ChU = checking for (own) understanding</td>
<td></td>
</tr>
<tr>
<td>CLAR = to clarify</td>
<td></td>
</tr>
<tr>
<td>COMP/CON = compare/contrast</td>
<td></td>
</tr>
<tr>
<td>COMP = comprehension level question (see RECALL)</td>
<td>REC</td>
</tr>
<tr>
<td>CONN = connection being made (broad scale)</td>
<td>CLT; INS</td>
</tr>
<tr>
<td>ConT = connection to another place in text</td>
<td>Q; RT; CRLT; RPT; RST</td>
</tr>
<tr>
<td>COT = connections to other texts</td>
<td></td>
</tr>
<tr>
<td>CR/DR = close/deep reading</td>
<td>ANAL; DA</td>
</tr>
<tr>
<td>CRL/RL = connection to real life</td>
<td>CRLT; CRL/RL; RSPEC; SCR; SCS</td>
</tr>
<tr>
<td>CRLT = connection to real life in that (or a given) TIME</td>
<td></td>
</tr>
<tr>
<td>DA = Deep Analysis</td>
<td>ANAL; CR/DR; DA; INS</td>
</tr>
<tr>
<td>EVAL = evaluations (good, bad, etc.) (pertaining to text)</td>
<td>EXT; JUDG; VAL</td>
</tr>
<tr>
<td>EX/EXPL = explanation/examples (SEE Ref. to Text (RT))</td>
<td>CRLT</td>
</tr>
<tr>
<td>EXT = extension (outside of text)</td>
<td>EVAL</td>
</tr>
<tr>
<td>HYP = hypothesizing</td>
<td>SCS; SPEC</td>
</tr>
<tr>
<td>INF = inferred information/ to be inferred</td>
<td>ANAL; CA; CR/DR; DA</td>
</tr>
<tr>
<td>INS = insight</td>
<td>EVAL; VAL</td>
</tr>
<tr>
<td>JUDG = judgment</td>
<td>ANAL</td>
</tr>
<tr>
<td>LT = use of lit term</td>
<td>ChT; ChU</td>
</tr>
<tr>
<td>META = metacognition</td>
<td>BK; PSPECa</td>
</tr>
<tr>
<td>MIS = misread/missed a part</td>
<td></td>
</tr>
<tr>
<td>MP = multiple perspectives</td>
<td></td>
</tr>
<tr>
<td>NA = not applicable/no answer will be given/micro-managing text</td>
<td>BK; MIS; PSPECa</td>
</tr>
<tr>
<td>OR = student asks “this or that”</td>
<td>HYP; SPEC</td>
</tr>
<tr>
<td>PRAC = practical (practical/pragmatic thinking)</td>
<td>CRL/RL</td>
</tr>
<tr>
<td>PRED = prediction in question</td>
<td>HYP; SPEC</td>
</tr>
<tr>
<td>PSPEC/PSPECa = personal speculation / reading into the text (a = usually incorrectly – text doesn’t say that)</td>
<td>RSPEC; SCR; SCS; SPEC; TSPEC</td>
</tr>
<tr>
<td>Q = uses quote</td>
<td>RPT; RST; RT</td>
</tr>
<tr>
<td>REC = recall</td>
<td>COMP</td>
</tr>
<tr>
<td>RPT = reference to previous text</td>
<td>Q; RT; RT</td>
</tr>
<tr>
<td>RSPEC = speculation pertaining to real life</td>
<td>PSPEC; SCR; SCS; SPEC; TSPEC</td>
</tr>
<tr>
<td>RST = reference to another place in the same text</td>
<td>ConT; Q; RT;</td>
</tr>
<tr>
<td>RT = reference to text</td>
<td>ConT; Q; RPT;</td>
</tr>
<tr>
<td>SCR = speculation on character’s response in real life situation</td>
<td></td>
</tr>
<tr>
<td>SCS = speculation on character’s response in their situation</td>
<td></td>
</tr>
<tr>
<td>SPEC = speculation about event/character (*see Journals above)</td>
<td></td>
</tr>
<tr>
<td>TSPEC = speculation within text</td>
<td></td>
</tr>
<tr>
<td>VAL = student’s values/judgment</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 4. Cross-Referenced Coding Index.*
for indications of analysis, such as AP (author’s purpose), CA (character analysis), CR/DR (close reading/deep reading), DA (deep analysis), and LT (use of literary term). All these codes still indicated analysis, a high-level thinking skill; I had just initially interpreted them separately. As I continued sorting through my codes, I cross-referenced as many as possible to related codes so I could more easily assess the different levels of critical thinking I believed each one indicated.

An Epiphany

Often, the students weren’t opposed to bringing to class questions they had already posted, but after about two weeks and just past the mid-point of the novel, I noticed that I was still directing much of the discussion. Having taught The Scarlet Letter several times in the past, I knew which important issues needed to be discussed, and by force of habit, I realized, after reviewing my field notes, that I was the one beginning each day’s discussion. Fearing that I was shortchanging my students, I mentioned this to them and instructed them, from that point on, to bring a printed copy of their questions to class, along with their books and notebooks, which they began to do.
At this point in the study I realized something about myself: I was afraid to trust my students. I’m not sure if this is due to my control issues or if it is the pragmatist in me, but I realized that even just saying something like, “Let’s talk about Pearl,” put me in the driver’s seat of the discussion. I steered the discussion where I wanted it to go. In my field notes that day I had written, “I get too involved in what I want to do, what I want them to get out of this…” Surely, the students directed the route, but I still drove the car. I think this lack of trust in my students is mostly due to fear on my part – fear that each period of students would take the discussion in a different direction; fear that some periods would find key issues on their own while others would not, leaving me to fill in holes where necessary (not the worst thing in life, but certainly a management issue); fear that I would have three different lessons going on any given day, with more fear that I would end up needing to create three different assessments for the same class. The worst thing about this revelation is that I knew better. In the past, I had let students lead the discussion, period by period, and they mostly discovered key issues on their own, without my interference. “So why the control factor now?” I wondered.

After much reflection, I realized that the stress of the year was getting to me: three different academic levels of students to prepare for, three very
different bodies of students to deal with, two different rooms to bounce between literally, and an action research project... What was driving me was time, or rather, the lack thereof. There simply wasn’t enough time to plan, time to grade, time to take field notes, time to reflect, time to read educational philosophies, time to write about them; time to make connections, time to be a mom, time to be a wife, time to be a friend. There just wasn’t enough of it – or me. So in order to survive, I instinctively went into “survival mode”: do what has to be done, what I know how to do; do it as well as I can – and hope for the best. Unfortunately, I feared that my self-preservation had shortchanged my students. I feared that I was robbing them of the opportunity to show me exactly how they could think critically, how they could shine.

As I continued to write in my field log that day, I also speculated that perhaps I was being too hard on myself. I had been looking at the students’ questions to see where they lined up with mine... was this really so bad? And I had been checking their levels of critical thinking... wasn’t this the point? “So maybe,” I guessed, “I don’t need to make huge changes. Maybe it’s just a matter of letting them start the discussion, and letting them take it where they want to go, wherever that is (within reason)... as long as they’re thinking critically.” This was my new resolve.
My last entry that day: “We’ll see how this goes.”

In My Classroom

The following day, instead of telling my students what I believed they wanted to discuss, I simply asked, “So what’s on your minds today? Where should we start?” Since they had a WIKI post due that morning on their reading of the next three chapters of the novel, I was sure they’d have something to say, and I was right. This opening was all the encouragement they needed. Immediately hands flew up, and the Topic du Jour was a key symbol.

“What’s up with the Black Man?” Laura wanted to know. Many voiced their agreement.

“OK, what about him?” I asked, playfully.

“Why did Hester and Dimmesdale sign the Black Man’s book?”

“Did they?”

Pilar immediately jumped in. “Hester says she did... Pearl insinuated Dimmesdale did.”

“Ahh...”

“So Hester did sign the book??” Laura wanted to know.

“Well, she did sin...” Teal jumped in.
“So is the Black Man Chillingworth?” Carrie asked, hesitantly.

“Wait a minute…” Laura was now confused. “So who is the Black Man?” she insisted.

“Who is the Black Man?” I threw the question back to the class.

A chatter and speculation amongst the students broke out here. “Hang on! Hang on!” I said as I tried to quiet them down so I could hear all of their responses. Patrick raised his hand.

“The devil.”

Pilar added, “I agree. The devil. Like because of her sin…”

“Yeah, I thought the devil, too,” said Laura, relieved that she hadn't missed anything after all.

From here, the students moved the discussion along, still bringing up questions they had posted on the WIKI the night before, such as the characterization of Pearl and why she believes she will receive a scarlet letter, and the significance of Pearl’s self-imposed green letter. I was pleased by the segues in discussion, because I saw that the students were taking the lead in the discussion as well as posing questions that lingered in their minds.

My role, from this point on, became more of discussion facilitator, asking questions such as, “So what does the color green usually signify, either
As often as possible, I tried to challenge students to answer their own questions by either bouncing their questions back to the class as indicated by repeating Laura’s question on the Black Man, or by asking a question that would enable them to make a connection to real life, such as in Pearl’s role-playing imitation of Hester’s scarlet letter. If ever a lull in discussion developed, I simply asked, “So what else did you ask on the WIKI?” which was usually all the prodding they needed.

As time went on, however, I realized that after about two days of students leading the discussion themselves, they needed more than a little prodding from me. Generally, after two days on their own, they seemed to think that the important points were discussed, and they were ready to move on. At this point I transitioned my role from facilitator back to teacher in order to supply any missing information I believed might be necessary for the students to fully understand the subtleties of the text.

_Hmmm_...

A little more than halfway through my study, while analyzing questions students posted on the WIKI, it became apparent to me that
students simply were not using the QAR strategy to help them form questions. Most questions they posted demonstrated analysis on some level, but rarely did anyone post questions making direct connections to life today; that is, I saw that the students weren’t asking any extension questions, so I decided to do a mid-study survey to check their overall feelings about how the reading was going as well as some gain specific information regarding the QAR strategy. In this survey, among other things, I asked students how they were applying the QAR to form their WIKI questions, and the majority indicated that they were not. To further my understanding of how and why students actually created their WIKI questions, I asked them to respond to the following journal prompt: Now that you’ve had three rounds of posting questions on the WIKI, are you posting questions you actually have, are you following the QAR format (the format I modeled for you), or are you posting something just to get it done? Of 21 respondents, only five indicated that they actually used the QAR format. Following my review of the journal entries, I shared the results with the class and asked why so many of them had avoided the QAR protocol when posting their questions. Several indicated that it took them too much time to try to categorize their own questions, while others stated that they didn’t feel they needed it to pose effective questions, indicating that it was just an extra and unnecessary step in the process.
When I brought this question up to my focus group, only one student indicated that she used the QAR format, but she only used it for extension questions, which she thought were too vague to post on the WIKI. “Nobody else was posting questions like that, so I didn’t, either,” she stated. The other five students indicated that the QAR just complicated matters:

“Categorizing complicated everything. You can say everything you want in a question, so there’s no reason to label.”

“I didn’t see the purpose in labeling. I can tell from the text if I need prior knowledge to answer a question. The labeling didn’t help at all.”

“I draw questions I don’t know. My questions are more in depth than if I used the QAR.”

“I just make my own questions, too. QAR is just in the back of my head. I only think about it when I really get the chapter… like if I really know it, I think, ‘Oh, maybe I should do QAR,’ but otherwise, I just do it myself.”

“No, I never used it. I never really understood how it was supposed to work. It just confused me.”

An additional comment made by Patrick, the student in my focus group with a GIEP, struck me: “I already know what to do when I don’t understand something… I didn’t see the point in learning something new when I already know what to do.”
Because students were indeed posting questions and thinking critically without the additional QAR scaffolding, I made the conscious decision to follow their lead and let them post questions as they saw fit. I saw no point in trying to force a protocol that students didn’t feel they needed to be successful, so without further direction from me students posted questions as they deemed necessary. At this point, I revised my research question to “What are the observed and reported experiences of teacher and students when the teacher allows the students to generate their own questions in order to increase critical thinking in secondary students placed in an Honors English classroom?” This newly revised question enabled me to focus on what the students were honestly asking rather than trying to force them into using a strategy they found ineffective.

**Hitting our Stride**

The last few weeks of the study continued with students leading the class discussions based on their WIKI questions. My only attempts at generating discussion were in the form of opening questions such as, “So, what’s on your minds today?” From that point on, the students led, and I frantically tried to scribble notes while interjecting with occasional questions
to stir the proverbial pot; that is, I asked questions that encouraged them to think more deeply about their own questions or steered them in the direction to find their own answers.

As we continued in this pattern, and as I continued to analyze their posted questions, I realized that several students were becoming more adept at either asking questions with direct quotes from the text or answering them by making direct references to text. Often, questions posted on the

![Figure 5. Example of student WIKI questions using quotes from text.](image-url)
WIKI, too, stated direct quotes from the text either in the form of a statement prior to or within a question, as illustrated in Figure 5. This figure illustrates one of my focus students’ entries. Laura indicated each of her questions with a dash, and I highlighted direct quotes from the novel in green. Here, her first, second, and fourth questions came directly from the text, and even her fifth question directly referred to text, although she did not indicate so by quotation marks. Several other students did likewise. I was thrilled by this, because this behavior showed me that students were, indeed, learning to read more closely and more deeply and were able to justify their answers to one another’s questions with text.

*Meet the Focus Group*

As I narrowed the focus of my study, I wanted to learn more about several students who had just moved up to the honors level from the college preparatory track this year, and I wanted to learn more about my students from diverse backgrounds, while also focusing on a student who had been in the honors track throughout his academic career. As a result, I chose Shona and Pilar, two students of color who had moved into the honors track this year; Kathy, a usually quiet student who had also moved from the college preparatory to the honors track this year; Laura, a student who had moved
into the honors track in ninth grade; Mary, an honors-level student with an IEP; and Patrick, an honors-level student with a GIEP. I felt that having the opportunity to study the experiences of this diverse group in some detail could help me to understand more about how my course might support the critical literacy of all students placed there.

As our study of *The Scarlet Letter* progressed, I was intrigued by the excitement that both Shona and Pilar brought to the room after each reading. On any given day, they were among the first to jump into the discussion, no matter who led it. Laura, too, was an active participant in our discussions, often the first to begin the discussion or respond to a question I posed.

Although not as dynamic in class, Patrick, Kathy, and Mary offered many insightful responses, more on an “as needed” basis, rather than on a daily basis. Even so, when they did speak up, their input and comments were on target and worthy of the wait. In the pages that follow, I will provide a brief profile of each focus group student, along with relevant examples of each student’s work.

*Mary*

Mary, whose IEP suggested that she had difficulty reading due to congenital eye problems, was one of the quieter students in the class as a
whole, but when she did speak up, she almost invariably made direct
connections to the text, with open book in hand. For example, during our
discussion of the image that Chillingworth found on Dimmesdale’s chest
while he was sleeping, Mary was the first to bring us directly to the text
noting, “On page 123 it says ‘A strange sympathy betwixt soul and body!’
That could mean that whatever it was, was from a problem, like, within his
soul....” This comment demonstrated a close analysis of the text, an
indication of high-level critical thinking. Similarly, while discussing who we
believed to be the greatest hypocrite in the story, she responded with open
book in hand, “Chillingworth, because he’s lying about his identity. It’s like
he’s enjoying his own secret of punishing Dimmesdale. Like on page 154 it
says, ‘...’,” and she continued to quote several lines from the text.

Similarly, on her WIKI posts, Mary asked a series of high-level
questions. Figure 6 illustrates Mary’s post for Chapters 16 through 18. All of
her six questions indicate that she is at least analyzing the text with two
questions, her first and third, referring directly to the text, and her second
evaluating the event.
Kathy

New to the honors program and definitely the quietest student in the focus group, Kathy nonetheless posted WIKI questions indicating high-level critical thinking. She was also one of the few students who tried to post questions following the QAR protocol for all but the last six chapters. Her extension questions, especially, indicated that she was trying to view the story through a contemporary lens, often interpreting the story in a personal context. Figure 7 illustrates Kathy’s questions for Chapters 16 through 18. Aside from the first question in which she has a typographical error and misstatement of the question, her questions indicate at least analysis of text.

Figure 6. Example of Mary’s WIKI questions.
Her fourth question, as indicated by dashes, actually evaluates the meeting as indicated by my EVAL code, bringing it into a contemporary context and indicating a high level of thinking according to Bloom’s taxonomy.

![Image](image.png)

*Figure 7. Example of Kathy’s WIKI questions.*

*Patrick*

The only male in my focus group, and the only student with a GIEP, Patrick evidenced his high-level thinking on a daily basis. Although not as active a class participant as some of the others, when he did speak, his answers were accurate and insightful. His WIKI posts, too, demonstrated fewer low-level questions than any other in the focus group, and he rarely posted a question that indicated a misread of the text or lack of prior knowledge, with only one out of his 62 questions doing so. *Figure 8*
illust rates Patrick’s WIKI post on Chapters 16 through 18. As indicated by the codes ANAL (Analysis) and CA (Character Analysis), most of Patrick’s questions demonstrated analytical thinking, a high level of critical thinking. This particular post is representative of Patrick’s posts as he read and questioned the novel.

![Image](image.png)

*Figure 8. Example of Patrick’s WIKI questions.*

*Laura*

Often one of the first to post on the WIKI and more often one of the first to participate in class discussions, Laura consistently posted more questions than any other student in the class. Not one to simply do a task to get it done, Laura asked as many questions as she hoped to receive answers for. While she sometimes posed questions that were either too specific or
micro-analytical to yield much new insight, most of her other questions suggested a high-level pondering on the significance of events. Figure 9 illustrates Laura’s post of questions for Chapters 10 through 12. Here, she seems to be asking only nine questions as indicated by dashes, but actually she has some questions within questions, tallying to fourteen questions in all. Interestingly, of the nine apparent questions, Laura posted three for which she either misread or micro-analyzed the text, the first, fourth and seventh questions. In microanalyzing, Laura looked for minutia in the text: “What herb is the ‘dark, flabby leaf?’” “How did Governor Winthrop die?” These specific questions were not addressed in the text since the answers had no bearing on the outcome of the plot; so by questioning such trivial matters Laura missed the greater point. Laura’s remaining questions, however, demonstrated her inquisitive nature when reading. She often posed questions with direct quotes from the text, as shown in her first, second, and sixth questions, usually indicating a high-level of critical thinking.

Although I coded Laura’s first questions as MICRO, meaning micro-analyzing text, she still shows critical thinking here: she seemed to be on the lookout for symbols and found one, the “dark, flabby leaf,” however loosely she asked her question.
Perhaps the most inconsistent student in my focus group, Pilar demonstrated her best critical thinking during classroom discussions. When she spoke, she was often literally on the edge of her seat, which indicated to me her excitement at contributing to the discussion. She was a frequent
participant, much to the annoyance of some of her other classmates, as I soon discovered. One day she was exceptionally quiet, although I thought I could see in her eyes that she had something to say. During the discussion she only contributed once, and then sank back into her seat, as if she had said or done something wrong. At one point in the discussion of the argument between Reverend Dimmesdale and Chillingworth, I glanced at Pilar, who often had insight into the Reverend's character. “Pilar?” I asked after someone had commented on his cowardice.

She leaned slightly forward and opened her mouth as if about to speak, but then sank back into her chair, pursed her lips, and gave her head a little shake to indicate that she would not be offering anything on the subject.

“Really?” I asked, confused. I knew this was a topic of interest to her. But again, she quickly shook her head no.

Within a second the bell rang, and she was one of the first to exit the room. Knowing that she and Shona were good friends, and since Shona remained in the room a moment longer, I asked her, “What’s going on with Pilar today? She’s never this quiet.”

“Ummm... well I’m not going to name names, but some people were telling her she talked too much in class... so I guess she decided not to.”
I’m sure she could see the annoyance in my face. “Well,” I replied, “no one has the right to tell her that. And if you see her, tell her I want her to participate. She has wonderful things to say, and I always look forward to her input.”

The next day Pilar was back to her talkative self, apparently ignoring the wishes of those classmates who had managed to keep her silent the day before. Continuing in the discussion of Dimmesdale’s character, the next day’s discussion focused around the character that the students believed to be the greatest hypocrite. As the discussion bounced between students who believed Chillingworth was the greatest hypocrite and those who believed it was Dimmesdale, Pilar offered her usual insight:

“Chillingworth kinda makes [Hester] hate him, but Dimmesdale preaches the Bible. He has the opportunity to fix things, like in the governor’s house, but he doesn’t… He just thinks of his reputation…”

After several students commented on the previous events at the governor’s house, she went on:

“[Dimmesdale] still wanted to help… he wouldn’t be able to, though… He, like, doesn’t have it in him… “

... (banter)
“It’s not so much that he has to confess, but like, take responsibility at least.”

...  

“Like in the second scaffold scene, he still doesn’t really do anything... not to help Hester’s situation, anyway.”

This dialogue indicates the type of insight Pilar brought to the class every time she willingly participated in the discussion. Although her WIKI posts often seemed like she rushed through the activity, and although she didn’t always complete the WIKI posts, and at least once it appeared that she simply reworded the questions of the student who posted right before she did (i.e. she paraphrased someone else’s work), it was her classroom participation that allowed her to engage in and to demonstrate her highest levels of critical thinking.

Shona

One of the most fun days of discussion (for me, anyway) was after the last set of WIKI posts were due. Students had read the final three chapters of the novel and wrote their very speculative and very curious questions. On this particular day, Shona entered the class seconds before the bell, looked at me and said, “OMG, Mrs. Varela! Just OMG!!”
“What do you mean?” I played somewhat dumb, but smiled.

“OMG! Are you serious?? Everybody *dies*?? You’ve got to be kidding me! He made everybody *die*? I just couldn’t believe it. That’s just... wrong.”

“Hold on... we’ll talk about this. Let me get class started,” I said as the bell rang. “So...??” I began.

Not having had the time to look closely at the questions students posted on the WIKI this day, after class I looked specifically at Shona’s (Figure 10). This was one of Shona’s most interesting entries. Her

*Figure 10. Example of Shona’s WIKI questions.*
commentaries showed her frustration with the end events, yet she tried to reason through some of her struggles. Although not all the questions in this example indicated a high level of critical thinking, the few that did were ones where she demonstrated a change in her own thinking (ChT), which in turn demonstrated metacognition, an indication of high level thinking.

An Interesting Result

As I worked with my focus group, I realized that this group was indeed representative of the class as a whole. When I analyzed WIKI question results and extracted the focus group from whole class results, I discovered that the numbers were exact. For example, when I summarized whole class WIKI data (i.e. average number of questions at various cognitive levels), the results were the same for the focus group, as illustrated in Figure 11. This figure illustrates that the focus group posted 38% questions that analyzed, 6% questions that made connections, 11% questions that evaluated, 14% questions that demonstrated metacognition, 13% questions that speculated, 10% questions that demonstrated basic comprehension, and 8% questions that indicated no critical thinking. The same was true in the whole class results.
This comparison surprised me. I had not expected the results to mirror one another so closely. As I ruminated upon these results I concluded that, if nothing else, I had chosen my focus group wisely from among the various cognitive levels of my students. The class is comprised of students who have a wide knowledge base like Patrick, those who are very inquisitive and posted several questions per chapter like Laura, those like Mary whose questions were methodical and precise, those who used many of the available scaffolds like Kathy, those who sometimes posted questions they copied from others like Pilar, and those who sometimes posted questions just to get it done like Shona. On any given day, students may move from one of these categories to another, but as a whole, this particular honors-level class
demonstrated that their high-level critical thinking skills far outweighed their critical thinking shortfalls.

**Wrapping It Up**

At the conclusion of the study, I gave a final survey (Appendix C). On this Post-Study Reading Survey, I duplicated some of the questions on the past surveys, and I also asked questions specific to the strategies we had used. The results of this study are indicated in Table 1. The majority of the students responded favorably to posting questions on the WIKI, as demonstrated by the table below, in which 64% of their responses indicated that the WIKI was a positive experience. 86% of the students indicated that they were able to make better connections as a result of posting questions on
the WIKI, 67% indicated that posting questions helped them read and think

Table 1. *Survey Questions Related to the WIKI.*

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Strongly Agree/Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree/Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Posing my own questions on the WIKI helped me read more critically.</td>
<td>67%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>7. Posing my own questions on the WIKI helped me think more critically.</td>
<td>67%</td>
<td>29%</td>
<td>5%</td>
</tr>
<tr>
<td>8. Posing my own questions on the WIKI helped me make better connections.</td>
<td>86%</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td>9. Posing my own questions on the WIKI helped me read more critically.</td>
<td>67%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>10. Posing questions on the WIKI was helpful in monitoring my comprehension.</td>
<td>67%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>11. Posing questions on the WIKI was relieving because I knew my questions would be answered in class.</td>
<td>62%</td>
<td>33%</td>
<td>5%</td>
</tr>
<tr>
<td>12. Posing questions on the WIKI was relieving because I knew others had the same questions.</td>
<td>62%</td>
<td>24%</td>
<td>14%</td>
</tr>
<tr>
<td>13. Posing questions on the WIKI was just another thing to do.</td>
<td>38%</td>
<td>24%</td>
<td>38%</td>
</tr>
<tr>
<td>14. Posing questions on the WIKI was a waste of time.</td>
<td>10%</td>
<td>19%</td>
<td>71%</td>
</tr>
<tr>
<td>15. I tried to answer my own questions on the WIKI.</td>
<td>52%</td>
<td>24%</td>
<td>24%</td>
</tr>
</tbody>
</table>

**Summary of Favorable Responses**

<table>
<thead>
<tr>
<th>Strongly Agree/Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree/Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>22%</td>
<td>14%</td>
</tr>
</tbody>
</table>
answers, and 62% said that they were relieved knowing that other students had the same questions and that their questions would be discussed in class.

Also, according to the results of the survey and as indicated in past questions and both formal and informal interviews, the students did not look favorably upon the QAR strategy, an opinion they had voiced on numerous other occasions. Only one student indicated that QAR helped her read more critically, compared to 14 (67%) describing the strategy as confusing and a waste of time for them.

One Last Look

Since I have always hoped that my students would be life-long learners, and because deep in my heart I believe that asking questions and challenging texts and authors help students to think critically, months after the completion of my action research project I wanted to see if my students were indeed still generating their own questions while reading, thus transferring this strategy to other learning situations; therefore, I conducted a Post-Post Study Survey (Appendix J). The results yielded a very pleasant surprise: 75% of the students in my focus class (15 of 20 respondents) indicated that they were still posing questions when reading a challenging text. Figures 12, 13, and 14 illustrate the responses of Robert, Carrie, and
Patrick, respectively, three students who stated that they continue to use this strategy.

Robert’s response states that he continues to pose questions when he encounters a difficult text, and does so often. This indicates that Robert has transferred this strategy to other learning situations.

Post-Post Study Survey

Do you still pose questions when you encounter a difficult text? If so, what do you find beneficial about this strategy? If not, what do you do to aid your comprehension?

I still pose questions when reading difficult text. I find this strategy beneficial because it allows me to both learn more about what I'm reading and discover the text I don't understand. I find myself posing questions while reading quite often.

Figure 12. Robert’s Post-Post Study Survey response.
Carrie’s response states that she, too, continues to ask questions of the text. Carrie, however, views this activity as directly related to our study of *The Scarlet Letter*, as she mentions in her response: “...ever since we read *The Scarlet Letter* I have found myself asking questions ...” By stating her opinion in these terms, I inferred that Carrie attributed her acquisition of this skill to our study of the novel, which is exactly what I had hoped for.

![Figure 13. Carrie’s Post-post Study Survey response.](image)

Patrick, one of my focus group students shared a similar response. He said that he now poses questions “all the time.” He further states: “Asking questions certainly makes for a better understanding of the text.” This
response, too, indicates that Patrick has transferred the questioning strategy from just *The Scarlet Letter* to other learning situations.

![Post-Post Study Survey](image)

Post-Post Study Survey

Do you still pose questions when you encounter a difficult text? If so, what do you find beneficial about this strategy? If not, what do you do to aid your comprehension?

Yes, I find myself asking questions about the text all the time when I don’t understand something. It often helps me to pinpoint big ideas in a piece of literature, such as theme or symbolism. Asking questions certainly makes for a better understanding of the text.

*Figure 14. Patrick’s Post-post Study Survey response.*

After reading through all the responses, I realized that I hadn’t specifically asked the students if they now used this strategy for other content areas. I was afraid that the students answered the question only regarding questioning texts in my class, including readings in our unit on the Transcendentalists, but that they still failed to ask questions of difficult history or science texts, or even while reading the newspaper, so the next day I tried to clear this up.
“OK, guys, I know I promised no more surveys, but I have to ask you one more question. Yesterday many of you responded that you do still ask questions of the text when you don’t understand something, so this question is for you: Do you ask questions just when reading literature, like for the reading you do for this class, or do you now ask questions even for history, or when you read the paper, or whenever you find yourself unsure of what you’re reading? Raise your hand if you now ask questions of text outside of but including this class.” Fourteen hands went up (one student who had indicated yes on the survey was absent), with students adding side comments:

“Yeah, I actually do.”

“Yup.”

“All the time... it’s like I can’t help it now.”

Many heads nodded in agreement.

One student asked, confused, “Wait, isn’t that what we were supposed to do?”

“Yes,” I replied, “but I wanted to make sure you all got that. I was a little vague in my question. Chalk it up to a novice teacher-researcher mistake!” After a sigh of relief, I could now be certain that the transfer I
desired had, indeed, taken place, giving me a happy sense of closure to this particular questioning journey.

METHODS OF ANALYSIS

According to Wolcott (2009), data analysis observes, measures, and communicates experiences – in my case, as a classroom teacher. As teacher-researchers, we collect data to look more closely at what goes on in our classrooms for the purpose of informing decisions we make in the education of our students. During the course of my action-research project, I collected several types of data and wrote various types of memos on both my informational readings as well as my initial speculations on how my study was going. Understanding that data collection requires focus to remain manageable (Bogdan & Biklen, 2003), I tried to manage my data by continually viewing what I gathered in direct relation to my students’ critical thinking.

Student Work

I learned a great deal from the questions my students posted on the class WIKI. Each day, I printed these questions and used them as a
springboard for class discussions. I later coded these questions according to levels of critical thinking I believed were indicated (i.e. analysis, checking for understanding, making connections to previously read text, etc.) (Figure 15).

### Preliminary Coding Index

<table>
<thead>
<tr>
<th>WIKI QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS = misread/missed a part</td>
</tr>
<tr>
<td>AP = author’s purpose (delete)</td>
</tr>
<tr>
<td>INF = inferred information/to be inferred</td>
</tr>
<tr>
<td>CA = character analysis</td>
</tr>
<tr>
<td>LT = use of lit term</td>
</tr>
<tr>
<td>AN = answer needed ??</td>
</tr>
<tr>
<td>NA = not applicable/no answer will be given/micro-managing text</td>
</tr>
<tr>
<td>BR/BGK = lack of background knowledge</td>
</tr>
<tr>
<td>PRED = prediction in question</td>
</tr>
<tr>
<td>EVAL = evaluation</td>
</tr>
<tr>
<td>SPEC = speculation about event/character (<em>see Journals above)</em></td>
</tr>
<tr>
<td>OR = student asks “this or that”</td>
</tr>
<tr>
<td>ConT = connection to another place in text</td>
</tr>
<tr>
<td>ChU = checking for (own) understanding</td>
</tr>
<tr>
<td>CR/DR = close/deep reading</td>
</tr>
<tr>
<td>Q = uses quote</td>
</tr>
<tr>
<td>REC = recall</td>
</tr>
<tr>
<td>CRL/RL = connection to real life</td>
</tr>
<tr>
<td>PRAC = practical (practical/pragmatic thinking)</td>
</tr>
<tr>
<td>COMP = comprehension level question (see RECALL)</td>
</tr>
<tr>
<td>ChT = challenge to current thinking</td>
</tr>
<tr>
<td>RT = reference to text</td>
</tr>
<tr>
<td>HYP = hypothesizing</td>
</tr>
<tr>
<td>CONN = connection being made (broad scale)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JOURNALS &amp; DISCUSSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST = making connections to other places in same text</td>
</tr>
<tr>
<td>RST = reference to another place in the same text</td>
</tr>
<tr>
<td>COT = making connections to other texts</td>
</tr>
<tr>
<td>CRL = making connections to real life</td>
</tr>
<tr>
<td>CRLT = connection to real life in that (or a given) TIME</td>
</tr>
<tr>
<td>CLT = connection of real life to text</td>
</tr>
<tr>
<td>COMP = comparisons</td>
</tr>
<tr>
<td>EVAL = evaluations (good, bad, etc.)</td>
</tr>
<tr>
<td>EXT = extension</td>
</tr>
<tr>
<td>EX = explanation/examples (SEE Ref to txt)</td>
</tr>
<tr>
<td>VAL = student’s values/judgment -- REREAD LOG – THIS IS A NEW INSIGHT ON MY PART</td>
</tr>
</tbody>
</table>
I also marked areas where students referred to literary terms such as symbol, foreshadowing, setting, et cetera, and I marked where students referred directly to the text, especially if they included a quote. Whenever I suspected a pattern of thinking emerging, I tried to assign a code to interpret it, and as often as possible, when I was in doubt regarding what the question revealed, I checked with the student to see if my interpretations were accurate.

I also collected responses that students wrote to journal prompts I provided on various themes in *The Scarlet Letter*, and what I called “Metalog” prompts which gauged their metacognition at key points in their reading. I coded their responses in these according to indications of critical thinking as well.

To determine how I would code the students’ questions and writing, I looked for key words indicating Bloom’s taxonomic level or something germane to the nature of the question (i.e. did the question reveal lack of prior knowledge, or was the student asking a question that bore little relevance to the plot?). I then combined my categories into indicators of
literal thinking, high-level thinking or lack of critical thinking, looking for patterns that might generate themes. I had also begun categorizing each question according to the level of the QAR I believed it demonstrated, but when I realized the students had abandoned this strategy, I, too, abandoned coding in this fashion and concentrated more on the questions they were asking rather than the ones they were not.

Surveys and Interviews

I conducted three surveys during the course of my study, the first for baseline information on reading and comprehension, and the second and third focused more directly on The Scarlet Letter and interventions (Appendices A, B, and C). I used the results of the surveys to determine (1) if students felt that their comprehension levels increased or decreased while reading The Scarlet Letter, (2) to what degree they were using the QAR and if they found it a useful strategy, and (3) if they found posing their own questions on the WIKI helpful or “just another thing to do.” I tabulated the results of each survey by student and according to each category, and I compared the results as a whole to determine if there were any noteworthy changes or insights.
Because I saw some discrepancies between the questions students posted on the WIKI and what was going on in class, I also included a Metalog prompt regarding the authenticity of the questions students posted on the WIKI. I compared the results indicated by this prompt with the survey results to determine if my students posted questions they actually had or if they were posting questions just to get it done.

I also compared the results of focus group interviews with the results of surveys to determine the effectiveness of the strategies and to gather more specific information from my students. I also used the interview results to compare learning styles and strategies used among students who were new to the honors program and students who had been in the honors program for several years.

Field Notes

Throughout the course of my study, I kept a field notebook, which served as a log of daily classroom occurrences. According to Ely, Vinz, Downing, and Anzul (1991), “the log is the data” (p. 70), and this was true for me, for here, I jotted down questions and comments students posed during our class discussions, along with observational notes on student behavior and what went on in the classroom that day. I coded these notes also,
Figure 16. Coding bins.
following the advice of Ely, Vinz, Downing, and Anzul (1997), looking for evidence of critical thinking, again following Bloom’s Taxonomy and my own additions, and I also used this space to speculate on “why” students questioned as they did. I compared and contrasted the questions students posed during class discussions with the ones they posted on the WIKI, looking for similarities and differences between the “live” discussion questions and the “virtual” ones.

Once I coded all these data according to patterns I believed to be emerging, I organized these codes into bins according to their similarities (Figure 16). Upon “binning” these codes, I further analyzed the data, compared them to my initial research question regarding indicators of critical thinking, and generated thematic statements on what I believed the information in each bin presented (Figure 17). The information in these themes provided me with insight as to levels of critical thinking taking place in my classroom.

I also analyzed my notes to reflect on my behavior as a teacher. Here, I speculated on how my behavior may have affected student questions and how they arrived at answers, noting as often as possible my involvement in the discussion and which questions I asked versus which answers I gave.
Theme Statements

1. When reading a difficult text such as The Scarlet Letter, students must engage in high level critical thinking to make meaning.

2. When students ask questions, they demonstrate high-level critical thinking when they:
   a. Analyze text as is evident in questions that regard characterization, refer to the text specifically and generally, demonstrate close reading, demonstrate deep analysis, use direct quotations from the text, compare and contrast, use literary terms, infer meaning, show practical/pragmatic thinking, provide examples, and demonstrate insight;
   b. Speculate about text in asking questions that hypothesize, predict outcomes regarding characters and/or events, try to decide between two possible outcomes/reasons, ponder a character’s response in his/her situation or a real life situation, consider how the situation applies to students’ personal lives or real life in general, and consider how the events pertain to the text as a whole;
   c. Extend their thinking by making connections from the text to real life, to real life in the time/setting of the text, to other places in the same text, to other texts, and on a broad scale.

3. Students demonstrate metacognition, a high-level critical thinking skill, when they change their thinking, challenge a current belief, or transfer a skill to a new learning situation.

4. When students ask basic comprehension questions such as questions that recall, ask for clarification, or need an answer for comprehension, they demonstrate literal thinking, an important but low-level skill.

5. Lack of background/prior knowledge, lack of understanding an author’s purpose, and misreading are obstacles that may hinder the development of higher-level critical thinking.

Figure 17. Theme statements.
Reflective Memo Analysis

Lastly, during the course of this study, I read the work of several educational theorists such as Paulo Friere (1970), John Dewey (1938), Lev Vygotsky (1978), and Lisa Delpit and Joanne Kigour Dowdy (2002) to give me different lenses through which to analyze my data. After reading their work, I wrote reflective memos in which I tied some of their theories to what was going on in my classroom. Reading Friere enabled me to view my study from a dialogic perspective, making me more aware of the need to inspire critical thinking and inquiry in all my students. Reading Dewey helped me analyze my study through a progressive lens, trying to ensure I used no strategies that were “mis-educative” (p. 47). My reflections on reading Vygotsky helped me to view my study through the lens of social interaction, analyzing whether or not my interventions helped my students work within their respective zones of proximal development. The work of Delpit and Dowdy enabled me to view my study through a socio-cultural lens, making me aware of the academic and cultural diversities among my students and how these diversities may have affect the students’ level of confidence and achievement.

I also wrote a mid-study memo, where I analyzed my early data and speculated on the effectiveness of my interventions. I read and re-read early
data, realized some problems emerging, and conducted a previously
unscheduled survey in the form of a Metalog (as previously mentioned) to
learn more about the issues. In this mid-study memo, I also speculated on
what my early findings revealed and made necessary changes to redirect my
study to fit the needs of my students.

FINDINGS

As I studied my data, I realized that only a few themes emerged, but
these themes spoke volumes on student learning.

*When reading a difficult text such as* The Scarlet Letter, students must
*engage in high level critical thinking to make meaning.*
As I looked more closely at my data, I realized that my students were indeed posing questions that demonstrated a high level of critical thinking. Figure 18 represents an overall summary of the students’ questions by type of question. Questions that analyze, make connections, evaluate, speculate, and demonstrate metacognition all indicate high level thinking according to Bloom’s taxonomy. When all of these types of questions are added together, they can be summarized by high, low, or no level of critical thinking, as indicated in Figure 19, the summary by cognitive level of question. These types of questions comprised 82% of those my students posted, with 38% analyzing, 6% making connections, 11% evaluating, 13% speculating, and
14% of questions demonstrating metacognition, as discussed previously.

Prior to beginning the study, I had not taken into account how the very nature of the text would so greatly influence the nature of the questions posed, but my data suggest that this is indeed the case. While much published research suggests that students generally will ask higher order thinking questions when encouraged to do so (Chin, Brown, & Bruce; Commeyras, 1995; Hervey, 2006; LeNoir, 1993; Mills, 2009; Shaunessy, 2000; Supon & Wolf, 1993; Wilson & Smetana, 2009), I had not anticipated that the very nature of the text would be such a huge contributor. Since *The Scarlet Letter* was a difficult text, much of the meaning-making process required inference, a high-level thinking skill. The use of this skill, by default, caused students to make connections, analyze, and speculate on the text, also
high-level thinking skills. It appears that the nature of the text forced students to engage in high-level thinking to make meaning.

The students further proved this assertion by their comments in the last survey: 52% indicated that they usually tried to answer their own questions. They indicated that posing their questions often made them look more closely at the text to discover answers on their own. Here I was able to tie their response to constructivist learning theory (Piaget, 1937), whose principle is that students construct their own knowledge, being at the center of their own learning as active participants rather than passive observers (Boghossian; Wang, Woo, & Zhao). According to this theory, when students do “figure it out for themselves,” they will more likely retain the newly constructed knowledge than if the information had just been told to them.

I was pleased by this response from my students, indicating to me that they were reading a difficult text with the mindset of figuring it out for themselves, thus demonstrating the constructivist nature of the student-generated questions strategy and its positive result.

*Students demonstrate high-level critical thinking skills when they ask questions that analyze, speculate, extend their thinking to areas outside the text, and evaluate.*
Analysis in student-generated questions, as previously discussed, indicates a high level of critical thinking, according to Bloom. When students analyze, they look deeper into the meaning of text, looking for relationships, making inferences, even hypothesizing about outcomes. Analysis occurs when students study character development, author's word choices, author's purpose and other literary aspects of text as well. Mary, in her post on Chapter 15 asks, “Why does Pearl keep questioning Hester as to why she wears the letter and why Dimmesdale keeps his hand over his heart?” By asking “Why does Pearl...,” Mary analyzes the character of Pearl; she looks deeper into why Pearl behaves as she does. As indicated in Figure 18, the vast majority of questions students posted were analytical in nature (38%).

When students speculate about circumstances, character development, themes, symbols, and possible outcomes, they demonstrate high-level critical thinking as well, and this illustrates another type of analysis. Questions such as Matt’s regarding Hester Prynne’s guilt in his Chapter 13 post indicate this type of analysis via speculation: “Did Pearl's persistence in asking about the relation between the scarlet letter and the minister’s heart make Hester feel even more guilty for Chillingworth’s torture of Dimmesdale?” Here Matt speculates on Hester Prynne’s character, as indicated by his phrase “more guilty.” Understanding the character of
Hester Prynne, Matt wonders if her daughter’s behavior and insight influences her more negatively than he originally thought. Many other students posted questions that analyzed by speculating. Figure 18 illustrates that 13% of the questions students posted on the WIKI were speculative in nature. Together, the basic analysis and speculative questions together comprised 51% of the questions students posted on the WIKI.

Extended thinking, another indicator of high-level critical thinking, is often demonstrated when students make connections between the text and real life, as shown by Kathy’s question posted on Chapter 13: “Do you think it’s sad for a seven year old child to be playing with her own reflection as her only friend?” As discussed previously, Kathy was the only one of my focus group students who still tried to follow the QAR protocol throughout most of the novel. By the question she posed here, Kathy puts Pearl in a real-life situation and has her reader speculate on the tragedy in Pearl’s action. Kathy clearly understands the context and ponders if the same situation would still be considered sad today. As shown in Figure 18, 6% of the questions students posted on the WIKI made connections that demonstrated extended thinking.

When students pose questions that judge, acknowledge multiple perspectives (i.e. perspectives other than their own), demonstrate their
evaluations of events and characters, show their personal values in their questions, and extend meaning beyond the text to real outcomes, they are actually evaluating key reading circumstances. Patrick posted such a question in his Chapter 14 entry: “Does Chillingworth realize after talking to Hester that his torture of Dimmesdale was a terrible thing to do?” Here, Patrick shows his values: torturing someone is terrible. He, in essence, places an evaluation on the situation. According to Bloom’s original taxonomy, evaluation represents the highest stage of cognitive engagement. As Figure 18 reveals, 11% of the total questions students posted were evaluative in nature.

*Students demonstrate metacognition, a high-level critical thinking skill, when they change their thinking, challenge a current belief, or transfer a skill to a new learning situation.*

Metacognition has been loosely defined as “thinking about thinking” or control of one’s thinking (Chin, Brown, & Bruce, 2002; Choi, Land, & Turgeon, 2005; Desautel, 2009; Georghiades, 2004; Hacker & Dunlosky, 2003; Kuhn & Dean, 2004; Lin, Schwartz, & Hatano, 2005; Mills, 2009; Raphael, 1982a; Raphael & Au, 2005; Raphael & Pearson, 1985; Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999; Smith, Rook, & Smith, 2007; Wilson &
Smetana, 2004; Wilson & Smetana, 2009). Hacker and Dunlosky (2003) discuss the idea that “metacognition involves higher-level thoughts that ‘oversee’ lower-level thoughts” (p. 73). According to this idea, when students use metacognition, they are actually aware of their thinking, analyzing their own cognitive processes, thus analyzing their understanding of the topic at hand. They do so by checking their own understanding and, when necessary, amending their thinking to reflect a current belief. Kuhn and Dean (2004) state that when students reflect on and evaluate their thinking, they are in essence developing their metacognitive awareness (p. 270), and Raphael (2005) adds that control of [learning] strategies “helps readers engage in the high levels of literacy for which they are accountable in their day-to-day classroom literacy activities” (p. 214). This research supports what I saw in my classroom.

During the course of my study, students often posted questions on the WIKI that indicated a change in their thinking. Teal, for example, in one of her posts, indicated a change in her thinking by asking a question followed by a comment: “Why does everyone like Hester now? I thought they all hated her?” In the same post she also asked, “Why did Roger Chillingworth say that he would continue to harm Reverend Dimmesdale? I thought he got the secret he wanted out of him.” Questions like this, especially when followed
by a comment, indicate that Teal had believed something about the characters, but new information required her to challenge the previous belief. This, in a sense, forced her to evaluate the validity of her previous belief.

Another student, Matt, demonstrated a change in his thinking in the body of his question: “Although Hester says she hates Chillingworth claiming that he had betrayed her, hadn’t she betrayed him by committing adultery?” This question, too, shows that Matt had an idea of betrayal between the characters, but a new statement by one of the characters in the text left him challenging his previous belief. Here, too, Matt was forced to compare new information with prior knowledge, evaluating the validity of both.

The metacognitive awareness of both of these students, as the research suggests, indicates a high level of critical thinking. Being able to compare a previous belief to new information enables students to self-monitor their learning and make adjustments as necessary.

Often, students make these adjustments metacognitively; that is, they become aware of strategies they can use in new circumstances, as in utilizing self-generated questions. King (1991) argues that students who were trained to generate their own questions ask more high-level questions. She claims, “[This …] may be an indication of strategy transfer to the novel.”
problem and may suggest that students internalized the questions and then applied them to the new task” (p. 316). My data support this assertion: according to the results of my post-post study survey, 75% of my students indicated that they continue to pose questions to aid their comprehension when reading difficult texts; thus, the students are indeed transferring the strategy to the new task. Further research (Raphael & Pearson, 1985; Wilson & Smetana, 2009; Ciardiello, 1998) indicates that metacognitive strategies can and should be taught in order to bring students to higher levels of achievement in the classroom, moving them along on the road to becoming life-long learners. This, too, seems to have occurred in my classroom, as students continue to use a strategy, self-generated questioning, that I had originally required them to use.

*When students ask basic comprehension questions such as questions that recall, ask for clarification, or need an answer for comprehension, they demonstrate literal thinking, an important but low-level skill.*

Every now and then, students posted questions indicating basic comprehension of the text. Logan, for example, posted many comprehension level questions, indicating that he was having difficulty making meaning of the text: “What is referred to as ‘the Black Man’?” “Is Pearl really a child?”
“Are Pearl and Dimmesdale bonding?” “What is the public’s opinion of Dimmesdale?” These questions show that Logan is reading and interpreting the text on a literal level, and according to King (1992), “a student’s self-generated questions... presumably are highly relevant to that student’s own comprehension needs” (p. 122). King suggests that a student’s questions are directly related to his or her learning need, and she further suggests that even when the student asks lower-level questions, he may still benefit from posing his own questions because he is self-directing his meaning-making process. The autonomy he is given may encourage him in the self-questioning process, and as he becomes more adept at posing questions, he should eventually begin to ask questions at a higher cognitive level; therefore, even comprehension level questions are important and may eventually lead to higher-level critical thinking.

Other students, too, asked comprehension level questions, but these questions may have been posted to experiment with the QAR protocol. For example, Julie asked, “Why do the magistrates want to take Pearl away from Hester?” This question was addressed explicitly in the text through dialogue. Similarly, in her first post, Kathy, one of the students in my focus group, asked, “Why does Hester name her baby Pearl?” This question, too, indicates basic comprehension of the text, for the answer was explicitly stated. In both
cases, however, the questions may also indicate that the girls were following of the QAR protocol, especially in Kathy’s case. As mentioned earlier, she was one of the few students who found the QAR beneficial and had stated in an interview that she tried to use it in all her posts until she realized many other students had ceased doing so.

As I studied this further, I realized that the students who posted low level questions were still functioning within their respective zones of proximal development (Vygotsky, 1978). Kuhn & Dean (2004) concur, stating that much of the ability to function at higher cognitive levels is a result of the student’s maturity. In other words, not all students have the same intellectual maturity as their peers at a given time. This is not to say that the less mature students will not arrive at the cognitive levels of their more mature peers; they are just not there yet.

Keeping all this in mind, I was please to see that only 10% of the questions posted on the WIKI were comprehension-level questions, as indicated in Figure 18. This shows that students were much more frequently posting questions at higher cognitive levels.
Lack of background/prior knowledge, lack of understanding an author’s purpose, and misreading are obstacles that may hinder the development of higher-level critical thinking.

Throughout the course of my study, I occasionally noticed questions indicating a lack of background knowledge. Most often these questions came as a result of not understanding the Puritan belief system or not having a personal religious background. For example, Carrie’s question “What does Dimmesdale mean by ‘At the great judgment day!’? Is that the day he will tell everyone that he is the father of Pearl?” This question indicates that Carrie most likely hasn’t been “churched;” that is, she hasn’t been exposed to the Judeo-Christian philosophy of a day where all mankind will stand before God for a final judgment based on their lives on earth.

Veronica also posted a question indicating a lack of background knowledge: “Why did Hester dress in such gloomy colors?” In this case, not only does Veronica demonstrate a lack of prior knowledge regarding the Puritan belief system, but she also misread or missed vital information in the text that acknowledged that issue in a previous chapter.

Occasionally, student questions suggested their misreading of text, suggesting that they missed something that may be critical to their ongoing understanding the rest of the text. For example, Logan, in one of his posts,
asked two questions that demonstrated misreading: “How come Chillingworth might try to poison Hester?” and “How did Chillingworth know to come to Boston to look for Hester?” Both of these questions indicate that Logan missed something while he read. The answer to the first question was given a few paragraphs later, and the answer to the second needed to be inferred from previous chapters. This misreading stymied Logan’s ability to make connections between the characters and their motivations, and in turn, slowed his ability to comprehend the rest of the text.

Examples such as these indicate a stalling of the student’s ability to think critically. Without prior knowledge, students are hindered from moving forward, making valuable connections or gaining deeper insights into text, and the same is true when students misread. A study by Reeves, Kazelskis & Kazelskis (1987) found that when students lack background knowledge, favorable outcomes are unlikely when they pose their own questions because they may lack the schema relating to whatever subject matter is under discussion. Their shallow learning base may disable them from generating higher-level questions. Bransford (1979) concurs, stating that having prior knowledge is necessary for student-generated questions to be beneficial. Although this proved true in my classroom, I was grateful to
see that only 8% of the questions the students posted demonstrated a breakdown in the meaning-making process.

**THE NEXT STEP**

Looking back on the past year’s project, I see that I learned as much about myself as a teacher as I did about my students. I see that I need to trust my students more, because if they have been instructed well and given the supports they need, they will indeed step up to a learning challenge. As difficult as a text may be, most students will try to figure it out for themselves, for with this self-discovery comes confidence, an attribute all students desire, especially in the years preceding college. And as a step to this self-discovery, I will still challenge my students to ask questions of the text, to challenge text. I am pleased to see that so many of my students this semester strove to find answers to their questions, and they did so by reading more closely and asking more questions, even questioning their own questions and discoveries, and through this process they did indeed demonstrate high level critical thinking, which was my overall goal.

Now that I have seen firsthand the benefit of students generating their own questions, next year I will begin with this strategy even earlier in the year. Having had such success with this strategy, I am eager to try using it
with my college preparatory and academic classes, but with them, I plan to begin with the QAR as a bridge to student-generated questions. Knowing that one of the students who was new to the honors program relied on the QAR model suggests to me its benefit, especially for students who may not already be self-monitoring their comprehension as well as their higher achieving peers. I still believe that in certain contexts and with certain students, the QAR strategy can increase students’ comprehension abilities as well as their critical thinking skills.

As I continue pondering the lingering question of what I would do differently given the chance, I continue to struggle with the use of the WIKI, which proved to be so valuable for my students this semester but which still leaves me with so many unanswered questions. Although I love the use of weblogs and online discussion forums, the problem with the WIKI is that once the first student posts, his questions are visible to all the other students, so copying the work of others is easy, especially if a student lacks time-management skills. I still toy with the idea of utilizing Moodle, another online discussion forum where students respond privately to prompts posted by an instructor (i.e. their posts are visible to no one but the instructor), but too often Moodle is off-line through the web browser available to our students, disabling them from getting their homework done on time and, in
turn, crippling classroom discussions stemming from these posts. At this point, I plan on continuing with the WIKI and reminding students to use the honor system in doing their homework.

One final look back tells me that I need to be more consistent with having students bring their questions to class. Yes, we still have classroom discussions. And yes, I still encourage students to take the lead on what we discuss. But I see now that I should continue this strategy for all areas of my curriculum, grammar and vocabulary included. I need to encourage my students to challenge grammar rules, vocabulary usage, et cetera. I realize now that I need to encourage my students to view this questioning strategy as not only a literature study tool, but also as a life-long learning tool, one which will cause them to think critically about anything in their world, to test its benefit and its worth, and to find value in every learning experience.
REFERENCES


Appendix A – Pre-Study Survey

Pre-Study Reading Survey
Name __________________
Period ___
Honors American Lit/Comp
Varela

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Rate your responses to the following comments using the above scale.

1. I like to read.
2. I read for pleasure.
3. I consider myself a strong reader.
4. When I read, I "get" it.
5. I can make inferences and draw conclusions with no problems.
6. While reading, I have the most trouble with comprehension.
7. While reading, I have the most trouble with unfamiliar vocabulary.
8. While reading, I have the most trouble with staying focused.
9. While reading, I am easily bored.
10. I only read because I have to.

11. What do you do when you're reading and you get stuck/lost/just don't get it?

12. What types of text do you find the most difficult to read (literature, science, history, other)?
Appendix B – Mid-Study Survey

The Scarlet Letter Reading Survey I
Name __________________
Period ___
Honors American Lit/Comp
Varela

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Rate your responses to the following comments using the above scale. Responses should reflect your understanding of The Scarlet Letter ONLY.

1. While reading TSL, I usually "get" it.  
2. I can make inferences and draw conclusions with no problems.  
3. While reading TSL, I'm having trouble with comprehension.  
4. While reading TSL, I'm having trouble with unfamiliar vocabulary.  
5. While reading TSL, I'm having trouble staying focused.

6. Which area in questions 3 – 5 is giving you the MOST trouble? Why do you think this is so?

7. What strateg(ies) are you using when you're reading and you get stuck/lost/just don't get it? (i.e. How are you using metacognition?)

8. Are you applying QAR to your study of TSL? If yes, how? If not, why not?

9. What, if anything, do you think would help you get through this difficult unit more easily?

10. Is there anything else you'd like me to know?? (THIS IS YOUR CHANCE! 😊)
You may use the back if necessary.
## Appendix C – Post-Study Survey

**Post-Study Reading Survey**

**Name __________________**  
**Period ___**  
Honors American Lit/Comp

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Rate your responses to the following comments using the above scale.

1. When I read, I "get" it.  
2. When I read, I get it better than I used to.  
3. Using the QAR helped me read more critically.  
4. I found the QAR confusing.  
5. I found the QAR to be a waste of time.  
6. Posing my own questions on the WIKI helped me read more critically.  
7. Posing my own questions on the WIKI helped me think more critically.  
8. Posing my own questions on the WIKI helped me make better connections.  
9. Posing my own questions on the WIKI encouraged me to read more deeply to find answers.  
10. Posing questions on the WIKI was helpful in monitoring my comprehension.  
11. Posing questions on the WIKI was relieving because I knew my questions would be answered in class.  
12. Posing questions on the WIKI was relieving because I knew others had the same questions.  
13. Posing questions on the WIKI was just another thing to do.  
14. Posing questions on the WIKI was a waste of time.  
15. I tried to answer my own questions on the WIKI.  
16. I took this activity seriously.  
17. I am more aware of my thought process as a result of this strategy.  
18. I am more aware of my thought process, but it is not as a result of this strategy.  
19. While reading, I now have less trouble with comprehension than I used to.  
20. I will continue to pose questions when I encounter a difficult text.
21. How did posing your own questions on the WIKI affect your critical thinking skills? PLEASE BE SPECIFIC! 😊

22. Which aspects of posing your own questions did you find the most beneficial? ... the least beneficial? PLEASE BE SPECIFIC! 😊

23. What is your general opinion of this strategy?

24. Is there anything else you would like me to know?

Thank you for your input! Your honest opinions are very valuable to me! 😊
## Appendix D – HSIRB Form

This form must be completed for any research activity involving human participants. All researchers must read the Moravian College Human Subjects Research Policy found at [Y/Humsub/policy/](Y/Humsub/policy/).

### Part I: RESEARCHER

<table>
<thead>
<tr>
<th>1. Proposer:</th>
<th>Bernadette R. Varela</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Department:</td>
<td>Master of Education</td>
</tr>
<tr>
<td>3. Mailing address:</td>
<td>875 Garden Court, Easton, PA 18040</td>
</tr>
<tr>
<td>4. Phone:</td>
<td>610.253.2022 (home) 610.217.9310 (cell)</td>
</tr>
<tr>
<td>5. E-mail address:</td>
<td><a href="mailto:varelab@eastonteachers.org">varelab@eastonteachers.org</a></td>
</tr>
</tbody>
</table>
| 6. This is a (circle one) | a. New Proposal  
b. Resubmission of a rejected Proposal  
c. Renewal  
d. Request for modification |
| 7. Title of Proposal: | Beyond the Surface: Using Question-Answer Relationship to Increase Critical Thinking Skills in Secondary English Language Arts Students |

### Part II: SUBMITING PROPOSALS

Incomplete documentation will delay the Human Subjects Internal Review Board (HSIRB) review of your research proposal. Submit all of the following:

1. This Human Subjects Internal Review Board Proposal Form
2. A copy of your Informed Consent form and/or other evidence of Informed Consent to voluntary participation [See HSIRB proposed Policy #MC.116 & MC.117. Can be viewed at Public/hsirb/]
3. A copy of your instruments (surveys, tests, etc.)

Submit proposals to:
Debra Wetcher-Hendricks, Chair HSIRB  
Sociology Department  
Moravian College  
1200 Main Street  
Bethlehem, PA 18018

### Part III: SIGNATURES

| PROPOSER'S Signature: | Date: |
Part IV: PROPOSAL

1. This research involves ONLY the use of educational tests (cognitive, diagnostic, aptitude or achievement). (Circle one.) Yes | No

2. This research collects interviews or surveys ONLY of elected or appointed public officials or candidates for such. (Circle one.) Yes | No

3. This research involves ONLY observations of public behavior. (Circle one.) Yes | No

4. This research involves ONLY existing data, documents, records or specimens. (Circle one.) Yes | No

5. List the research funding sources, if any.
   NONE

6. The results of this research will be published. (Circle one.) Yes | No | Uncertain

7. Summarize the Purpose of Research, including objectives and procedure/design

   The purpose of my research project is to investigate critical thinking skills in my honors-level students. Too often students enter my classroom without the tools to think deeply and critically about the literature we study. They read the surface meaning of the text but are unable to see the deeper meaning of the text or connect the text to a bigger picture. I hope to use a Reading Apprenticeship strategy to help my students develop critical thinking skills to aid them in their reading both inside my classroom and for the rest of their lives.

   Objectives:
   1. to examine the use of Question-Answer Relationship (QAR) as a tool to increase critical thinking skills in my 10th grade honors American literature students
   2. to note metacognitive processes students use to help them make meaning of difficult texts
   3. to reflect on data from the above in order to inform my practice

   Procedures:
   1. I will survey my students at the beginning of the project to discover how they feel about themselves as readers
2. I will ask for student volunteers to create a focus group and conduct a pre-study interview
3. I will frontload the QAR intervention
4. I will guide the students on use of this strategy
5. I will provide students with some pre-coded (categorized) questions
6. Students will monitor their metacognitive processes while engaged in using this strategy in a journal/meta-log
7. Students will create QAR questions of their own for each homework reading assignment, one for each category
8. I will keep a tally sheet of which students are answering questions based on a coding system for both student responses and student questions

Design

Methods:
1. I will use a student survey to assess how students feel about themselves as readers (Appendix A)
2. I will use interview questions with a focus group of students (Appendix B)
3. I will use questions pre-coded for levels of critical thinking for students to monitor their comprehension (Appendix C)
4. I will use questions pre-coded for levels of critical thinking for students to respond to during class discussions (Appendix D)
5. I will keep a tally sheet of students, their responses to questions which have been coded for levels of critical thinking, and questions students have newly formulated (Appendix E)
6. I will collect data from student journals/meta-log (metacognitive log) to track students language in examining their metacognitive processes as per prompts used in class (Appendix F)
7. I will keep a double-entry journal as a field log to note students’ affects, comments, etc. to inform my study
8. I will conduct a post-study survey on how students believe the intervention worked (Appendix G)
9. I will conduct a post-study interview with my focus group (Appendix H)

Analysis:
1. I will analyze data from the surveys to look for how students view themselves as readers
2. I will analyze data from focus group interviews to look for trends in …
3. I will tabulate, per student, increases and/or regressions in critical thinking as per my coded questions and their own questions
4. I will analyze student responses in their journals/meta-log to assess trends in metacognition and its relationship to any increase in critical thinking
5. I will categorize students responses by using language from Bloom’s cognitive taxonomy
6. I will analyze my field log to examine indications of student “Aha” moments and/or frustrations
7. I will analyze my field log to examine my speculations on what is happening during the course of my study and note the effectiveness of the intervention
8. Describe the processes used to obtain and manage subjects. Specifically, note a. the subject pool and characteristics of subjects, b. intended number of subjects, c. sampling method, and d. what is required of subjects. Attach additional pages as needed.

A. Subject pool – I plan on working with 10th grade students at the honors level whose ages will range between 15 and 16 years old. I will use a mix of male and female students from various ethnic, religious, and socio-economic backgrounds.

B. Intended number of subjects – I plan to analyze approximately 10-15 students, a few from each 42-minute period; however, all students will receive the same classroom instruction and will participate in the same activities.

C. Sampling method – Student have either elected to take an honors-level English class, have been placed in an honors-level class by their guidance counselor or by parent(s) request, or have been referred to an honors curriculum by their former English teacher. I will select student-participants at three levels: those who struggle with English Language Arts at the honors level, those who are average honors students in English Language Arts, and those honors students for whom English Language Arts comes easily.

D. Subject requirements – All students will have been asked to participate in the study, but data will only be used and analyzed on those students who have submitted a signed parental consent form. Activities and instruction will be geared toward all students in the classroom, whether or not they choose to participate in the study. All subjects will be invited to participate in a focus group, but only data from those who have submitted consent forms will be used.

9. This research is intended to investigate issues associated with the following GROUP(S) vulnerable to risk. (Circle all that apply.)
   a. Subjects under the age of 18
   b. Prisoners
   c. Pregnant women
   d. Handicapped or mentally disabled persons
   e. People with special vulnerabilities (e.g. allergies, taking special medications, etc.); Please identify________________________________________________

If you circled any or all of 9a through 9e, explain why you need to use the group and the methods you will use to minimize risk.

My subjects are under the age of 18 because they are high school sophomores between 15 – 16 years old.

In order to minimize risk:
1. I will distribute parental consent forms to all students in my class. (Appendix I)
2. I will seek administrative permission from my building principal. (Appendix J)
3. I will use pseudonyms for all participants.
4. I will keep all study-related material in a secure location in my home.
5. I will remind students and parents alike that they may withdraw from participation in the study at any time.
6. Student grades will not be affected by participation or non-participation.
7. All data gathered during the study will be destroyed at the conclusion of the study.
10. The subject group(s) for this research may unintentionally include individuals with the following characteristics, which increase the vulnerability to risk. (Circle all that apply)
   a. Subjects under the age of 18
   b. Prisoners
   c. Pregnant women
   d. Handicapped or mentally disabled persons
   e. People with special vulnerabilities (e.g. allergies, taking special medications, etc.);
      Please identify: Students identified as gifted, students with IEPs, students who have asthma or are allergic to bee stings.

If you circled any or all of 10a through 10e, explain the methods that you will use to minimize risk to these individuals.

In order to minimize risk:
   1. I will contact the school nurse, case managers, and the gifted student coordinator to inform each of my study.
   2. I will closely follow IEPs and GIEPs.
   3. I will have parental permission via signed consent forms allowing their children to participate in the study.

11. Explain by whom and how the subjects will be initially informed of the purposes of this research project. [Make references to HSIRB Policy #MC.116 & #MC.117.]

I will inform students and parents of the purposes of this research project by sending home an explanatory letter with a consent form. The form must be signed by the student and his/her parent in order to participate in the study.

12. This research involves deception of subjects. (Circle one.) Yes | No
    If Yes, describe the nature of the deception and your debriefing procedure. Please attach the debriefing statement presented to subjects.

13. This research collects information that (Circle all that apply.)
    a. deals with sensitive aspects from the participant's point of view.
    b. uses subject names or number codes with which a subject can be identified.
    c. might place the subject at risk of liability if made public.
    d. might place the subject's financial standing or employability at risk if made public.

If you circled any or all of 13a through 13d, explain the methods you will use to
    a. safeguard the data you collect
    b. inform subjects of available support services, and
    c. minimize the risk to the subjects.

To safeguard data and minimize risk to the subjects:
   1. I will use pseudonyms for all participants.
   2. I will keep all study-related material in a secure location in my home.
   3. I will remind students and parents alike that they may withdraw from participation in the study at any time.
   4. All data gathered during the study will be destroyed at the conclusion of the study.
April 8, 2010

Dear XXXXXX,

I am currently taking classes towards a Master’s Degree in Curriculum and Instruction at Moravian College. These courses assist me in implementing the most effective teaching strategies so I can provide the best learning experiences for my students.

During the fall semester, I will be required to conduct a systematic study of my own teaching practices. The focus of my research will be the use of Question-Answer Relationship (QAR) to increase critical thinking skills in my students. The QAR is a reading comprehension strategy used to aid students in determining how to answer questions from difficult texts. This strategy will help me determine to what degree learning is taking place as well as quickly assess the critical thinking skills of each individual student on a daily basis. My goal is to help all students achieve greater academic success.

I will be gathering information to support my study through responses on QARs developed by me, QARs the students develop themselves, student journals, surveys, interviews, work samples, and observation. This data collection will help me determine how I can best meet the needs of all students in the class. All student names will be kept confidential, as will the names of teachers, other staff, and the school. Only my name, the names of my sponsoring professors, and Moravian College will appear in this study. Any information that may reveal the identity of a student-participant will be altered to protect confidentiality. All research materials will be kept in a secure location in my home, and all data gathered during the study will be destroyed at the conclusion of the study.

All of the students in my classroom will receive the same instruction and assignments as part of the regular English curriculum. Participation in this study is entirely voluntary and will not affect the student’s grade in any way. Any student may withdraw from the study at any time by writing me a letter or sending me an e-mail stating that he or she would like to do so. A parent or guardian may also withdraw the student through a letter or e-mail. If a student withdraws or chooses not to participate, either by his or his parent’s choice, I will not use any information pertaining to that student in my study, and the student will not be penalized in any way.

If you have any questions or concerns about this project, please feel free to call me at XXXXXXXX or e-mail me at varelab@eastonsd.org. You may also contact my faculty advisor at Moravian College, Dr. Joseph Shosh, by phone at XXXXXXXXXXXor by e-mail at jshosh@moravian.edu. If you have no questions, please sign and return the bottom portion of this letter. Thank you in advance for your consideration.

Very truly yours,

Berni Varela

_____________________________________________________

I attest that I am the principal of the teacher conducting this research study, and that I have read and understand this consent form, and that I have received a copy. Berni Varela has my permission to conduct this study.

Principal’s signature ________________________________
Appendix F - Parent Consent Letter

August 30, 2010

Dear Parent(s) or Guardian(s),

I am currently taking classes towards a Master’s Degree in Curriculum and Instruction at Moravian College. These courses assist me in implementing the most effective teaching strategies so I can provide the best learning experiences for my students.

During the current semester, I am required to conduct a systematic study of my own teaching practices. The focus of my research this semester is the use of Question-Answer Relationship (QAR) to increase critical thinking skills in my students. The QAR is a reading comprehension strategy used to aid students in determining how to answer questions from difficult texts. This strategy will help me determine to what degree learning is taking place as well as quickly assess the critical thinking skills of each individual student on a daily basis. My goal is to help all students achieve greater academic success.

I will be gathering information to support my study through responses on QARs developed by me, QARs the students develop themselves, student journals, surveys, interviews, work samples, and observation. This data collection will help me determine how I can best meet the needs of all students in the class. All student names will be kept confidential, as will the names of teachers, other staff, and the school. Only my name, the names of my sponsoring professors, and Moravian College will appear in this study. Any information that may reveal the identity of a student-participant will be altered to protect confidentiality. All research materials will be kept in a secure location in my home, and all data gathered during the study will be destroyed at the conclusion of the study.

All of the students in my classroom will receive the same instruction and assignments as part of the regular English curriculum. Participation in this study is entirely voluntary and will not affect the student’s grade in any way. Any student may withdraw from the study at any time without penalty by writing me a letter or sending me an e-mail stating that he or she would like to do so. You as parent or guardian may also withdraw the student through a letter or e-mail. If a student withdraws or chooses not to participate, either by his/her choice or yours, I will not use any information pertaining to that student in my study, and the student will not be penalized in any way.

If you have any questions or concerns about this project, please feel free to call me at XXXXXXXXX or e-mail me at XXXXXXXXXXX. You may also contact my faculty advisor at Moravian College, Dr. Joseph Shosh, by phone at XXXXXXXXX or by e-mail at XXXXXXXXXXX. If you have no questions, please sign and return the bottom portion of this letter by September 7, 2010. Thank you in advance for your consideration.

Very truly yours,

Berni Varela

________________________________________________________________________________

I give my permission for my child, ______________________________, to participate in Mrs. Varela’s classroom project and for data on him/her to be used.

Parent/Guardian signature ________________________________
Appendix G – Focus Group Interview Questions

Interview Questions for Focus Group

How have you studied literature in the past?

Do you generally ask questions on things you don’t understand, or do you wait for the teacher to ask & see if your questions come up?

What goes into how you ask/pose questions? (How do you decide the difference between a “what...” question and a “how” question?)

Would you have posed/brought questions to class if I hadn't made you?

How would you have approached TSL if I hadn’t made you journal & pose your own questions?

Regarding QAR, those who use it, what specifically is working for you?

If you don’t use it, what about it turned you off?

Have you always been in honors classes?

If not, when & why did you move up?

To former CP Students

What made you move up this year? (teacher recommendation/ parents/ your own desire)

Why had you been in CP previously?

What are your thoughts on being in honors now? I.e. How do you feel about your move?
Appendix H – QAR on Edwards

QAR for Jonathan Edwards’ “Sinners in the Hands of an Angry God”

- What images are used to describe hell? (TI)

- What is it that keeps us from eternal damnation? (TI)

- How do we know God is being personified? (SI)

- If someone were to give a “fire and brimstone sermon” today, what images might s/he use to convince others to change their ways? (E)

Now come up with four questions of your own, one from each category. These questions can be to aid your own understanding, or ones you feel may be appropriate for a quiz or test.

TE: __________________________________________

__________________________________________

TI: __________________________________________

__________________________________________

SI: __________________________________________

__________________________________________

E: ____________________________________________

__________________________________________
Appendix I – WIKI Questions to Monitor Comprehension

**READER REVIEWS for THE SCARLET LETTER**

In addition to answering each question, code each uncoded question using the following key: TE (Textually Explicit), TI (Textually Implicit), SI (Scriptually Implicit), E (Extension)

**Chapter 1**
According to the narrator, how is the condition of the jail door related to its function in the community? (TI)
What plant has grown outside the jail, and how do people try to explain it? (TE)

**Chapter 2**
What was Hester Prynne’s crime? (TI)
What was her full punishment? (TI)
What do most Puritan women think of Hester and her punishment? (TI)

**Chapter 3**
Where does the scene at the beginning of Chapter 3 take place? (TE)
What three things does the stranger ask the townsman? (TE)
What are Reverend Wilson and Governor Bellingham urging Rev. Dimmesdale to do? (TE)
Why might they ask him this? (SI)
How does Hester respond? (TE)

**Chapter 4**
What is the relationship between Hester and Roger Chillingworth? (TE)
Why does Chillingworth partially blame himself for Hester’s situation? (TI)
What does Chillingworth vow to do? (TI)
What does he ask Hester do to? Why do you think he does this? (TI/SI)

**Chapter 5**
How does Hester support herself? (TE)
What does Hester do with the extra money she makes? (TE)
How do the people respond? Why? (TI)
How is Hester treated when people see her in the street? (TE)
What does the scarlet letter enable Hester to do? (TI)
Chapter 6
Describe Pearl: physically, emotionally, her general disposition. Why has Hester named her this? (TI)
What is the very first thing Pearl noticed in her life? (TE)
What does Hester sometimes wonder about Pearl? (TE)
How does Pearl respond to the other children in the settlement? What reason is given for this? (TI)

Chapter 7
What do the Puritan children want to do to Hester and Pearl while they're on the way to the governor's house? (TE)
What is Pearl's reaction? (TI)
Why might she react this way? (SI)
Who is the “leech,” and what does this word imply? (TI/SI)

Chapter 8
What does Gov. Bellingham think should be done with Pearl? Why? (TE/TI)
What is Hester's response? (TE)
Why does she appeal to Rev. Dimmesdale for help? (SI)
How does Pearl react to Dimmesdale after he finishes speaking? (TE)

Chapter 9
What reason does the narrator give for Dimmesdale's current appearance? (TI)
What change have the townspeople noticed in Chillingworth? Why do they think this is happening? (TE)

Chapter 10
What does Chillingworth believe is wrong with Dimmesdale? (TI)
How does Dimmesdale react? (TE)
What does Dimmesdale do when Dimmesdale is asleep? (TE)
What does he find? (SI)

Chapter 11
How does Dimmesdale feel about Chillingworth? (TI)
What does he do about these feelings? Why? (TE/SI)
In Dimmesdale’s vision, what two things does Pearl point to? (TE)

Chapter 12
Where do Hester and Pearl find Dimmesdale the night of Governor Winthrop’s death? (TE)
What does Pearl ask Dimmesdale, and why is it significant? (TE/SI)
What phenomenon do Hester, Pearl, and Dimmesdale see in the night sky? (TE)
The following morning, what does a parishioner sat was found on the scaffold? (TE)

Chapter 13
What is the community’s general opinion of Hester after all this time? (TI)
What does the “A” come to mean in the community? (TE)
What does Hester decide to do about Dimmesdale’s deteriorating physical condition? (TI)

Chapter 14
What does Hester notice about the changes in Chillingworth’s appearance? (TE)
Who or what does Chillingworth blame for this change? (TI)
Why does Hester visit Chillingworth after all this time? (TI)
What does she want Chillingworth to do? (TE)

Chapter 15
What does Pearl create for herself while playing on the beach? (___)
What is Hester’s final answer to Pearl when Pearl asks what the scarlet letter means? (___)

Chapter 16
What is Hester hoping to tell Dimmesdale when she meets him in the forest? (___)

Chapter 17
What is the first important question Dimmesdale asks Hester? (___)
How does Dimmesdale respond to Hester’s news? (___)
What does Dimmesdale say is “blacker than [his] sin”? (TE)
Why does Dimmesdale believe he cannot leave Boston? (TI)
What is Hester’s response to this? (TE)
Chapter 18
What happens to Hester when she removes the scarlet letter in the forest? (___)

Chapter 19
Why doesn't Pearl come when Hester calls her? (___)
What does she make her mother do? (___)
What two questions does Pearl ask after Hester tells her Dimmesdale loves them? (TE)
What does Pearl do when Dimmesdale kisses her? (TE)

Chapter 20
How will Hester, Dimmesdale, and Pearl leave town? Be specific! (TI)
Describe Dimmesdale's behavior on his way back to town. (___)
What does he fear he has done? (___)

Chapter 21
What does Chillingworth talk to the sea captain about? (___)
How does Hester learn of this? (___)

Chapter 22
How does Dimmesdale behave as he passes Hester and Pearl in the procession? Why? (___)
How does Hester interpret this? (___)

Chapter 23
What is the crowd's opinion of Dimmesdale after the Election Day sermon? (___)
What does Dimmesdale reveal to the crowd? (___)
What did Pearl do to Dimmesdale? What does this symbolize? (___)

Chapter 24
What were the four theories about Dimmesdale's revelation? (TI)
What did Chillingworth do for Pearl after he died? (___)
What two theories are given about Pearl's whereabouts at the end of the story? (___)
What happened to Hester Prynne at the end of the story? (___)
Appendix J – Post-Post Study Survey

Post-Post Study Survey

Do you still pose questions when you encounter a difficult text? If so, what do you find beneficial about this strategy? If not, what do you do to aid your comprehension?