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Struggling Readers and Content Area Text: Interactions with and Perceptions of Comprehension, Self, and Success

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Abstract

This year-long case study examines how a struggling reader in a sixth-grade social studies class, a seventh grade mathematics class, and an eighth grade science class “transacted” with the reading task demands of her specific classroom. Through regular classroom observations and interviews, the researcher documents how each student responded to and worked with text and reading instruction provided by her respective content area teacher.

The results suggest that each student attempted to be engaged with text as much as possible and was interested in learning course content. However, the ways in which the students approached text was heavily influenced by how she saw herself as a reader. Students who believed they could comprehend a piece of text were more willing to engage with it than if they believed it was too difficult. However, even when a student chose not to read a portion of text, she considered other ways in which she might learn the content being presented. Overall, the results suggest that there is more to working with struggling readers than considering the type of instruction they need. The case presented here suggests that teachers and researchers need to find ways to understand the connections between identity and instruction.

Introduction

According to the recent results from the 2003 NAEP reading exam, struggling readers are common at the middle school level. Forty-two percent of the eighth graders tested were considered to be reading at a basic level. Students in this category had only partially mastered the reading skills for their grade level. In addition, another 26% were considered to be below the basic level. This suggests that these students are minimally prepared, at best, to comprehend and learn from text.

Struggling readers are likely to experience at least some difficulty comprehending the texts required of them in school and, in particular, content area classrooms. Though students who are a part of this population will have their own unique strengths and weaknesses, common characteristics among them include: (a) having difficulty decoding text (Swanson, 1986), (b) having poor metacognitive skills (Paris & Oka, 1989), (c) not comprehending what they read (Worthy & Invernizzi, 1995), and (d) struggling to apply comprehension strategies appropriately (Bakken, Mastropieri & Scruggs, 1997).

Middle school curriculum typically demands that students read from textbooks to learn content (Bulgren & Scanlon, 1998). With this demand comes the expectation that students will have the ability to comprehend texts (Klingner, Vaughn, & Schumm, 1998). While struggling readers may have previously been taught comprehension strategies that could aid them in these situations, they are unlikely to make these generalizations across content areas and apply them to the texts they read (Anderson & Roit, 1993).

To add to this problem, students of all reading abilities are likely to experience some difficulty comprehending their content area textbooks. Analysis of these textbooks revealed several problems that include: (a) not providing enough background information on the topics being discussed (Graesser, Leon, & Otero, 2002), (b) containing content specific vocabulary (Beck, McKeown, Sinatra, & Loxterman, 1991), and/or (c) introducing new concepts too quickly (Engelmann, Carnine, & Steely, 1991). This may result in struggling readers having significant problems gaining access to content, passing courses, and doing well on state and national exams if they are expected to read texts to gain knowledge.

Though struggling readers are faced with significant challenges in this area, little research has addressed this topic. The work that has suggests that struggling readers may find ways to circumvent the reading requirements in their content area classes due to the difficulties they have with text (Brozo, 1991). This multiple case study reports on how three middle school struggling readers, Sarah, Nicole, and Alisa, transacted with the reading task demands in their content area classrooms. The findings suggest that each student's ideas, beliefs, and personal goals about herself as a reader and as a student influenced the ways in which she transacted with text. Results also indicate that not all struggling readers are trying to find ways to get around reading text, but in some cases are trying to find ways to learn content they are unable to comprehend. These results expand upon and challenge the ways in which we think about middle school struggling readers and their positions inside content area classrooms.

Theoretical Framework

Three theoretical frames informed the conceptualization, design, and methodology of this case study. First, I used a transactional lens to examine how meaning between students and teachers is constructed. A transactional lens allows one to view learning in the classroom as involving more than only teachers' behaviors or only student responses to teacher behaviors. As Rosenblatt (1985; 2004) explained, transactions are, "an ongoing process in which the elements of parts are seen as aspects or phases of a total situation."

Rosenblatt drew on Dewey and Bentley's (1949) discussion of the term. They argue that studying the decisions and behaviors that people make and engage in through a transactional lens provides a more detailed and explicit understanding of what took place. According to Dewey and Bentley (1949), this lens recognizes and considers how multiple factors in an environment motivate and influence the ways in which people engage with each other and their surroundings. A critical aspect of this lens is an understanding of the decisions people make. Developing such understandings involves more than observations alone.

Viewing teaching and learning through a transactional lens recognizes that people cannot be separated from the situation they are in. Multiple factors will influence the ways in which students and teachers engage with each other and their surroundings. Until an understanding of these factors is gained, the sense that can be made from initial observations is tentative at best. Prior knowledge about teachers, students, and learning will be useful in understanding the transactions between students and teachers, but that knowledge alone is not adequate enough to fully understand a given situation.

A transactional lens allows one to view teaching and learning as complex and multi-layered. To understand how teachers and students decide to work with each other requires an understanding of these layers and how they influence a given situation. These layers may look different across classrooms and contexts as the people involved change and bring new/different motivations and influences to bear on the situation.

Considering how students and teachers *transact* with each other and their surroundings allows for a broader and more accurate view of the situation as opposed to considering how they *interact* with these things. According to Rosenblatt (1985), the term transaction is more inclusive than the word interaction. Interactions, she states, consist of two or more entities acting upon each other. This term takes a behaviorist stance by seeing the events that transpired as a stimulus/response interaction.

It is important to note that I use the term *transaction* as a way to describe and understand the actions that take place between students and teachers. I am not using the term as it is applied in Rosenblatt's (2004) transactional model of reading. According to Rosenblatt (2004), the transactional model of reading is just one way in which the construct of transaction can be applied. Thus while I use Rosenblatt's definition of the term transaction, I framed this study according to the key principles discussed by Dewey and Bentley (1949).

Socio-cultural and socio-cognitive perspectives on reading and learning also framed this study. Both of these stances provide a way to better understand classroom transactions by developing understandings of: (a) the cognitive processes students do/do not apply to the reading task demands of their classroom, (b) the situational factors that influence the ways students approach this, and (c) teachers' understandings of these areas and how such understandings impact their transactions with students. For this study I viewed reading as both a social and a cognitive process where students and teachers regularly interact with each other and text in an attempt to achieve a variety of cognitive and social goals (Purcell-Gates, Jacobson, & Degener, 2004; Ruddell & Unrau, 2004).

Within this frame, students and teachers are seen as constructing and reconstructing what it means to be a reader within a classroom, what counts as literacy and being literate, and the norms for which students should engage with the reading task demands of the classroom (Bloome & Kinzer, 1998). While these constructions can be influenced by many factors, one way is through the transactions that take place between teachers and students (Bloome & Green, 1992). Students may construct their ideas about the ways they should transact with the reading task demands of the classroom based on conversations with a teacher and/or discussions and lessons about text.

In addition, the ways students decide to transact with the reading task demands of their classroom can also be influenced by their socially situated identity (Gee, 1996). This means that the ways in which students choose to approach their tasks with text, and how they choose to transact with their teachers and peers in relation to this, can be influenced by how they see themselves and how they want others to view them. These identities can be reconstructed based on students' transactions with teachers, peers, and the reading demands of the classroom.

The ways in which teachers choose to transact with students can also be influenced by a number of things. Teachers may construct beliefs about a student's abilities, motivation, behavior, and knowledge of content based on conversations they have with the student and their understandings of the decisions and actions that students engage in. The transactions that result between teacher and student can be impacted by these beliefs. These meanings and decisions that students and teachers make are situational and can look different across classrooms (Gee, 1996; Santa Barbara Discourse Group, 1994).

Though social and cultural influences can impact students' transactions, cognitive processes play a role as well. Students' transactions with the reading task demands of their classrooms can be influenced by background knowledge, vocabulary knowledge, understanding of how/when to apply comprehension strategies, and their ability to interpret and make sense of text (Kintsch, 2004; Ruddell & Unrau, 2004). Theoretically, students should be able to learn new information from text by applying this knowledge as they read. Teachers can help students improve in these areas by being aware of their strengths and weaknesses and recognizing where more instruction is needed.

However socio-cognitive theories state that these processes will be influenced by the social and cultural contexts of the classroom (Langer, 2004). For example, students may understand how and when to apply comprehension strategies to text, but may avoid doing so within a specific context based on their socially situated identity (Gee, 2004). Students may feel that using such strategies may cause their teachers/peers to view them in a way that they do not wish to be seen. This may result in students' choosing not to understand a piece of text to maintain a particular identity.

To gain a more accurate view of how students transact with the reading task demands of their classroom it is important to have an understanding of all these factors. By only having knowledge of, for example, the social and cultural context of the classroom, the complete situation within which students are a part is not taken into

account and a limited understanding will most likely be reached. Therefore, this frame provides a way for looking at how students' knowledge of specific cognitive processes, as well as their understandings of the social and cultural environment they are a part of, influence their approaches to the textual demands of their classrooms and the ways in which they learn.

Finally, this framework also provides a more detailed look into how teachers transact with students. These theories allow for an examination of teachers' understandings of students' cognitive abilities and how such understandings impact the ways in which they transact with them. It also allows a way to look at teachers' understandings of how socio-cultural contexts impact the decisions that their students make with text and the ways in which these understandings influence their transactions.

Struggling Readers: A Definition

This study uses the term *struggling reader* to describe the reading abilities of Sarah, Nicole, and Alisa. Over the years, research literature has used a wide range of labels to describe students like them. These include *poor readers* (Zabucky & Ratner, 1992), *disabled readers* (Ford & Ohlhausen, 1988), and *retarded readers* (Neville & Hoffman, 1981).

Despite the difference in terminology, the literature on struggling readers provides us with a description of the variety of strengths and weaknesses students in this category may have. For example, some struggling readers may be able to decode words easily even though they do not comprehend what they are reading (Worthy & Invernizzi, 1995). Others may not even be aware that they are having comprehension problems at all (Kim & Goetz, 1994). For the purposes of this study, a student is considered to be a struggling reader if he/she has (a) been documented on norm-referenced tests as reading one or more years below his/her current grade level and (b) has shown to need additional support in reading comprehension from his/her classroom teacher.

Related Research

Research studies in content area reading typically focus on methods teachers can use that can help students comprehend content area texts (Guastello, Beasley, & Sinatra, 2000; Klingner, et al, 1998; Lederer, 2000; Montali & Lewandowski, 1996; Musheno & Lawson, 1999; Spence, Yore, & Williams, 1999). These studies suggest that students' comprehension of expository texts can be improved when: (a) they are taught how to use graphic organizers, (b) when they are explicitly taught how to be metacognitive and apply specific comprehension strategies, and (c) when students are able to hear text read aloud as they follow along with it.

Though this research has helped both teachers and teacher educators consider ways to increase students' comprehension of content area texts, few studies have examined other factors that may influence how students, and in particular struggling readers, approach text and the degree to which they are able to learn from it (Brozo, 1991, McCarthey, 2002). This study focuses on further developing these understandings since these interactions have the potential to affect the ways in which struggling readers learn content and/or how they improve as readers of content area text.

Reading in the Content Areas

Researchers have examined content area textbooks and the purposes for which students read them in school. This research has concluded that textbooks are often poorly written and unorganized, can be difficult to comprehend, and may not provide enough substantive information on the topics they discuss (Armbruster & Anderson, 1988; Beck et al, 1991; Engelmann et al, 1991; Graesser et al, 2002; Kesidou & Roseman, 2002). In addition, these texts often contain content specific vocabulary that may be unknown to readers and/or may present familiar words that take on new meanings within a particular subject area (Freebody & Anderson, 1983; Fuentes, 1998; Stahl, Jacobson, Davis, & Davis, 1989.).

Despite these criticisms, textbooks are common in content area classes at the middle school level (Bulgren & Scanlon, 1998). This means that, for many students, their ability to learn course content may depend on their

reading comprehension abilities (Klingner et al, 1998). Regardless of reading ability, it is believed that the majority of students can expect to encounter regular comprehension difficulties that will most likely inhibit their ability to learn (Graesser et al, 2002; Hill & Erwin, 1984).

In addition to examining textbooks, scholars also point out that reading in the content areas is often limited to helping students learn how to identify specific facts (Hurd, 1998; Norris & Phillips, 2002; Wineburg, 2001). Though this is considered to be an important skill, these researchers argue that students also need to be taught how to analyze and evaluate information as well as identify the biases in the texts that they read. Finally, they need to learn how to communicate this information to others (Holliday, Yore, & Alvermann, 1994).

The purposes for engaging students in this broad array of behaviors are two-fold. First these arguments suggest that this type of engagement with text can help prepare students to become critical, rather than passive, consumers of text after they leave school. Second, such instruction has the potential to help students learn the specific nuances that accompany subject matter reading. While one obvious goal of reading, regardless of subject matter, is to gain meaning from text, the ways and purposes for this can differ across content areas. For example, in science students may read texts to learn about specific scientific facts, laws, and principles. However, not everything written in a science text is intended to be taken as a fact or absolute. Therefore, students also need to learn to identify and understand the difference between facts and theories and the role they play in the field of science (Norris & Phillips, 2002; Vansledright & Franke, 1998).

This type of reading places specific demands on students. To move beyond stating basic facts, students must have sufficient background knowledge in their subject matters. Information cannot be evaluated and analyzed if a student does not have the necessary information to engage in these behaviors. In addition, students must also become more metacognitive about the ways in which they read and interact with text. Reading in this manner does not allow students to remain passive and repeat facts, though it has been shown that this is often what occurs in content area classrooms (Norris & Phillips, 2002).

Struggling Readers and Content Area Reading

As described earlier, students who are struggling readers can face a variety of challenges when reading content area texts in schools. A small amount of literature provides some insight into how struggling readers may deal with these problems. Johnston and Winograd's (1985) literature review on passive and poor readers suggested that these students might struggle with the problems of passivity, lack of motivation, and low self-esteem. These problems may result in students behaving in a helpless manner when they encounter reading tasks, failing to monitor their performance and/or apply strategies appropriately and effectively, and may leave some students feeling as though they are not in control of their learning and cannot succeed.

Other students may feel that they cannot do well because of their perceived low abilities as readers. Several studies have argued that students' perceptions of themselves as readers can potentially influence the ways they choose to engage with texts (Dillion & Moje, 1998; McCarthey, 1998; McCarthey, 2002). Finally, Brozo's (1991) study of high school struggling readers suggested that these students might rely on others for help, engage in disruptive behaviors, and/or try not to stand out in class.

Taken together, these studies suggest that struggling readers may not be likely to engage with texts, or seek help with texts, in ways that might help them develop their comprehension skills, particularly of content area texts. A bleak picture of the ways in which struggling readers engage with texts emerges from these studies. While some of these students might seek assistance, the overall portrait suggests that these are students who do not see themselves as improving as readers. Rather than actively trying to make changes in their academic life, struggling readers may be trying to find ways to lay low and get by or even create diversions intended to distract people from noticing their reading difficulties (Brozo, 1991).

In summary, the existing literature suggests that struggling readers may respond to the textual demands of their content area classrooms by trying to engage with texts as little as possible and/or by seeking help from others. However, these studies do not take an in-depth look across time that considers both how struggling

readers engage with content area texts and their rationales for doing so. Understanding these rationales will deepen our understanding of struggling readers and provide suggestions for working with them in content area classrooms.

Research Question

The following research question framed the data collection and analysis for this study:

How does a middle school struggling reader in a sixth grade social studies class, a seventh grade mathematics class, and an eighth grade science class transact with the reading demands in her class?

Method

Study Design

This study was designed using a descriptive, case study approach (Yin, 1994). I gathered descriptive information about each participant, how she transacted with the reading task demands of the classroom in which she was studied, and her rationales for the decisions she made. Data were collected within the context of the classroom that allowed me to document events as they naturally occurred. Finally, I was able to document patterns of and changes in behavior for each participant over time.

Participants and Setting

This study was conducted in three content area classrooms: science, math, and social studies. Each classroom was located in a separate district. The students and their teachers did not know each other. All classrooms were situated in a middle school, grades 6-8, in a suburban area just outside of a medium sized, Midwestern city. An average of 23 students was enrolled in each class.

Three students participated in this study: (a) Sarah, age 12, and in 6th grade, (b) Nicole, age 12, and in 7th grade, and (c) Alisa, age 13, and in 8th grade. Sarah was studied in the context of her social studies classroom, Nicole in a mathematics classroom, and Alisa in a general science classroom. None of the students knew each other. The gender of the students was kept constant. This was done to prevent differences in experiences that might have occurred based on gender (Wallbrown, Levine, & Engin; 1991). Three different content areas were included in this study because the ways in which struggling readers transact with the reading task demands of their classroom may look different across subject matter contexts (Alexander, 1997). Students were selected based on recommendations from their reading/language arts teachers.

All students were white, middle class children. They were considered to be struggling readers based on: (a) their scores on state reading tests and (b) their scores on informal reading assessments administered at the end of the previous school year. According to these assessments, Sarah read on a 4.5 grade level while Alisa and Nicole read on a 5th grade level at the start of the study.

Sarah and Nicole were identified as possible candidates for this study at the end of the previous academic year. Each was recommended by their previous year's language arts teacher. Alisa was identified in September of her eighth grade year after the original participant was dropped from the study due to extensive absences. Alisa's current language arts teacher provided me with assessment information that confirmed she met the requirements for this study. Each student and their parents signed consent forms for the study.

Data Collection

Data collection for the sixth grade classroom was conducted from August 2002 – May 2003. Data for the seventh and eighth grade classrooms occurred from August 2003 – May 2004. Data was gathered through bi-weekly field observations, questionnaires, interviews, student comprehension assessments, and collection of student work. All classroom observations, interviews, and comprehension assessments were audio-taped. Field notes were taken during each observation. An average of 52 observations, 50 minutes each, was conducted per classroom.

Observations were scheduled so that I could see a variety of classroom events. I spoke with each student's teacher weekly to learn what was being taught in the upcoming days. This allowed me to see activities that required the students to use a wide range of texts and to participate in both individual and group assignments and presentations. It also allowed me to ensure that I was present if one of the teachers planned to teach reading/comprehension skills to her class.

I documented the time that different activities, lessons, and transactions started and ended. This allowed me to state how long specific activities, such as reading a piece of text, occurred. I documented the time in two different ways. First, I noted the time whenever a new lesson or activity began. I also noted the time when the lesson/activity ended. Within this time frame I made note of the time whenever a participant changed her behavior and when she stopped participating in a particular event.

My role during the field observations was to act as a non-participant observer. I did not participate in class activities or interact with any of the students, including the participants. I chose this form of observation because it allowed me to closely document each participant. I felt that if I had acted as a participant observer, I might have engaged in activities that distracted me from my data collection and/or might have limited what I saw.

Questionnaire Data

All participants completed a questionnaire in October. This provided me with general background information about them. The questionnaires contained both short answer and multiple-choice questions. Short answer questions asked the students to describe what classes they liked most and least, why they felt this way, and how they felt about themselves as readers and writers. The multiple-choice questions asked them how they responded when they were expected to read both difficult and easy texts in the classes they were being studied in and how they responded to written assignments in these classes as well.

For the multiple-choice questions, each student was given a list of ways she might react in a given situation. I asked each student to circle all the answers that she believed she engaged in. I instructed the students to complete the questionnaire at home. They were given seven days, which included one weekend, to complete the questionnaire.

Interview Data

I interviewed each participant privately in October, January, and April. The interviews were semi-formal (Seidman, 1998). Each interview consisted of primarily open-ended questions and lasted, on average, 20 minutes per session. These questions provided the students the opportunity to discuss the events I had observed in their classrooms. This allowed me to have a deeper understanding of what I had seen. It also allowed me to clarify any questions that I had from the questionnaires, previous interviews, and observations. Finally, these interviews allowed me to document and understand any changes that may have taken place in the way that the students felt and responded to any of the things that occurred within the context of their classrooms.

I asked the students new questions at each interview to better understand what I saw them doing in the classroom. However, I also continued to ask them to discuss what they had said in previous interviews. This allowed me to clarify if any of their beliefs or behaviors had changed during the course of the study and, if so, to understand why. Interviews were scheduled so that it did not impede upon the students' academic schedules. Before each interview, I reminded them that I would not share what we discussed with their teacher or anyone else at their school.

Comprehension Assessment Data

Informal comprehension assessments (Bader, 2002; Woods & Moe, 2003) were administered to each student in October, January, and April to determine her growth, or lack of, as a reader of science, math, or social studies text. Sarah read and answered comprehension questions from the social studies text that is found in the Bader assessment (2002). Alisa read and answered comprehension questions from the science text found in the Woods and Moe assessment (2003).

Informal comprehension assessments like Bader (2002) and Woods & Moe (2003) do not exist in mathematics. Despite this, it was necessary to develop some understanding of how well Nicole could comprehend mathematics text. To do this, I designed comprehension assessments modeled after the ones created by Woods and Moe (2003)¹. Nicole was given six passages to read. The first three passages that she read came from a fifth grade math book, *Everyday Mathematics* (Bell, Bell, Bretzlauf, Dillard, Hartfield, Isaacs, McBride, Pitvorec, & Saecker, 2002). The last three came from the textbook she was currently using in her class, *Transition Mathematics* (Usiskin, Feldman, Davis, Mallo, Sanders, Witonsky, Flanders, Polonsky, Porter, & Viktora, 2002). Each passage ranged from 150-200 words. Passages were on a topic that had been discussed in class within the last two months. However, the passages had not been read in class. This was to ensure that Nicole had at least been exposed to the prior knowledge that she might have needed to comprehend the passages, but had not previously discussed the text itself.

During the assessment, Nicole was given the textbook opened to the page of the first passage. I explained all of the directions to Nicole before she began to read the text. First, I told Nicole the topic that she would be reading about and asked her to tell me what she knew about this subject. Then, I showed her the section(s) of the text that I wanted her to read. I told Nicole that she would first read the text silently to herself. She was instructed to let me know when she had finished reading. After she had read silently, Nicole read the passage out loud to me while I completed a running record. Next, I had Nicole retell what she had read. Finally, Nicole was asked a set of comprehension questions based on the text.

Nicole was told both before and after she read each passage that she was allowed to use the text to answer the questions. I asked Nicole 6-8 questions per passage. With the exception of the last question, each of the answers could be found directly in the passage. The last question for each passage was a higher-order thinking question that required Nicole to analyze, draw conclusions, or make inferences based on what she had just read. This assessment allowed me to gain a better understanding of Nicole's successes and struggles with mathematics text and her abilities to comprehend it.

Sarah and Alisa were also given assessments using the textbook for the class they were being studied in at each of the three time points. Each was asked to read three passages from her textbook. Procedures for implementing this aspect of the assessment were the same as the ones described above for Nicole.

Class Work Artifact Data

I collected a copy of all graded work that was completed by the students. This allowed me to gain a better understanding of their content knowledge and to monitor their responses to assignments. In addition, I was able to see how each participant performed on assignments that required her to use texts as well as with assignments that did not require her to use texts.

Inter-Rater Reliability

Inter-rater reliability was conducted in February and March. A trained doctoral student in education, Cathy, accompanied me to each classroom two times. Cathy noted the ways in which each participant transacted with the texts she was assigned to read.

Prior to the first session, I provided Cathy with two hours of training. During this training session I explained to Cathy how to take field notes on each of these three things. I taught her how to use my field note form and gave her a list of the different ways I had observed each teacher providing the participant with reading instruction. I also shared with Cathy the different types of transactions I had observed the students engage in with texts. While these lists were meant as a way to help Cathy understand what was taking place in the classroom, I stressed that the lists were not considered to be all-inclusive. I explained to Cathy that it was possible for her/us to see new transactions that had not yet been observed.

Inter-rater reliability analyses indicated that there were acceptably high levels of agreement in the ways in which the students transacted with the texts they were assigned to read ($k = .92$).

Data Analysis

Data analysis procedures followed methods recommended by Miles and Huberman (1994). Guided by the research questions, I first began by reading and rereading field notes to identify emerging initial themes in the data. Next I generated pattern codes as a way to group these themes together. As I coded the data, I regularly wrote memos (Glaser, 1978) that summarized my work, identified questions I needed to address, and theorized about the relationships I was discovering.

Data from each case was first analyzed individually. While working through this process, it became clear that the data gathered from the students could be categorized under three broader themes. These themes included: (a) the challenges each student faced when transacting with the reading task demands, (b) the successes they had when transacting with the reading task demands, and (c) their concepts about what it meant to be a successful reader. Within these themes, data was analyzed to determine not only what each student did, but also how often, why, and the contexts in which these actions occurred.

Questionnaires and interviews were also coded and categorized under these same themes. These codes were used to help triangulate my findings from the field notes and offered a deeper and more thorough explanation of what had been observed in the classroom. Comprehension assessments and student work were not coded. These documents were used to better understand the patterns and codes I found in the field notes, questionnaires, and interviews.

As I analyzed my data, I regularly returned to the memos I had previously written. This allowed me to make sure that any questions that had risen during the analysis had been addressed. It also allowed me to clarify the patterns I had discovered.

Results

The results from this study suggest that the ways in which each participant transacted with the reading task demands of her classroom was influenced by how she saw herself as a reader. These perceptions appeared to be in place at the beginning of the study and did not seem to change during the academic year. In addition, the girls' actions with text seemed to impact the extent to which they believed they understood what they read. The students in this study did not always feel the need to seek out help with text if they believed they comprehended it. However, a lack of understanding did not necessarily result in a student seeking help or applying comprehension strategies to a piece of text. Some students decided they would rather not understand a text rather than risk revealing their perceived inability to their teacher and/or peers.

The following sections elaborate on these conclusions. I first begin by examining the beliefs that each student had about herself as a reader. Next I discuss how these perceptions influenced the ways in which they read text. Then, I discuss how these perceptions influence the ways in which each student transacted with the reading task demands of her classroom. Finally, I examine what each student thought it meant to be a good reader and their understandings of how they did/did not fit this definition. I conclude by discussing the implications of this study in terms of literacy theory, previous research, teacher education, and future research.

Understanding Students' Beliefs

My interviews with each focal child indicated that they each held slightly different beliefs about their capabilities as readers in the content area in which they were being studied. In October, Alisa explained that, "Sometimes I'm not that good a reader. There are a lot of words I can't get." Alisa also explained that she was usually capable of reading some, but not all the texts Mrs. Baker, her teacher, required of her in science. She believed that she could read the textbooks, but that she could not comprehend the labs used to complete the science experiments. According to Alisa, the textbook was "pretty easy to understand" while the labs were "too hard" for her to understand.

Sarah viewed herself as “not a good reader” and explained that she was embarrassed by her poor reading abilities. Sarah felt that all sixth graders should be able to “read and spell good” but that she could not. In each interview, Sarah continued to stress that she felt her reading abilities were beneath that of her classmates. Sarah also stated that it was important to her that her classmates did not discover that she was a poor reader. Unlike Alisa, Sarah never indicated that she felt able to comprehend any of the texts she was assigned to read. In interviews Sarah consistently stated that she struggled to understand what was read in class and that she rarely believed she understood a piece of text in its entirety.

Though Sarah felt her reading abilities were low, she explained it was important to engage in behaviors that might suggest to others she was a good reader. Sarah repeatedly stressed that students might make fun of her if they found out she was a poor reader. This concern of being made fun of was also shared by Alisa. In interviews, Alisa explained that she did not want anyone, including Mrs. Baker, to think that she did not understand the text. She stated, “People might think that I don’t know what I’m doing, that I don’t know how to read. That would be embarrassing.”

Nicole did not align herself with the views held by Alisa and Sarah. She saw herself as a good reader who sometimes had difficulties understanding text. Nicole explained:

I’m a good reader because I like to read, but I’m not the best at it. I read a lot but there’s some words in books that I don’t understand. And sometimes there’s long words and I don’t know how to pronounce them.

Though she felt she sometimes had problems with the words in a text, Nicole believed she understood what she read in her mathematics class. According to Nicole, “I know what’s going on. I get it.” Observations showed that Nicole was never seen communicating to her peers or her teacher, Mrs. Harding, that she did not understand a piece of text.

Rationales for Reading Text: The Influence of Students’ Perceptions

Each student was expected to read text in their class. All teachers required that they either follow along with text as it was being read aloud or read it silently to themselves. On average, the students were expected to engage with text in this manner 9% of the total time in which they were observed. Data showed that the students interacted with texts in ways that appeared similar to each other. However, interview data showed that the students were engaged in very different behaviors, each influenced by their perceptions of themselves as readers.

Sarah’s belief that she was a poor reader, and her desire to keep her peers from discovering this, meant that she did not want to read text aloud in class. She explained:

I get nervous when reading so I don’t like to read in front of the whole class or in a big group. If we were reading something, I wouldn’t want to read. I’ll probably mess up on the words when I read them out loud and people will make fun of me.

Since Sarah was not reading out loud, she was expected to follow along and read silently to herself. However, simply listening to texts being read aloud did not seem to help Sarah understand them. Though observations indicated that Sarah looked at the text as it was being read aloud 81% of the time, interviews suggested that she struggled to both follow along, and make sense of, the text. Sarah explained, “I try to [pay attention] but it’s really hard. I just don’t understand much. Most of the time I just sit there and listen and look at pictures in the book.” Despite this lack of understanding, Sarah was never observed indicating to her peers or her teacher that she needed help with the text. According to Sarah, she did not ask for help because she felt she was not as smart as her classmates and she did not want them to think she was dumb.

Like Sarah, Alisa and Nicole were both observed looking at text as it was read aloud in class. On average, both girls followed along with text 94% of the time. However, their rationales for doing so were different.

Alisa believed that following along with the textbook as it was being read aloud improved her comprehension. She said:

I like it when we read out loud. It's better than reading in your head. When we read out loud, and I hear the words, it helps me to get it [to understand]. When I have to read to myself it's more hard. Some of the words are really long and I don't know how to say them. But if I just read it over I can figure it out. It's not too bad.

Data sources did not indicate that Nicole believed she benefited from following along with the textbook in the same manner that Alisa did. Interviews suggested that Nicole believed reading the textbook provided her with a way to get her assignments done in class. Nicole stated:

It helps me do the [assignment] problems. Like out of the book, there's a section to read before you have to do the homework. Sometimes it helps me understand, 'cause they'll be questions referring to the reading and that's why I like to read, so I don't have to go back and read it again.

In interviews, both Nicole and Alisa explained that they believed they understood the majority of the material in the textbook they were assigned to read. Though both Nicole and Alisa claimed they followed along with the text and usually read it, neither was ever observed asking questions about the assigned readings. Unlike Sarah though, this behavior was based on their perception that they understood the material being read and not a concern for what others might think of them. They felt there was no reason to ask questions about the readings from their textbooks since they believed they understood them.

While Sarah and Nicole were assigned readings primarily from their textbooks, Alisa was expected to read and complete labs conducted in science class. Labs were hands-on activities that provided students the opportunity to explore and learn more about a specific concept based on their current unit of study. The labs did not provide any information about the topic being studied. Instead, they gave step-by-step instructions for completing the assignment. In Alisa's class, students were assigned to groups of four to complete the labs.

As stated earlier, Alisa believed she was incapable of comprehending the labs. When labs were read aloud in class, Alisa said she followed along just like she did with the textbook. Observations supported this and showed that Alisa always looked at the text when Mrs. Baker read from it and/or explained it. When asked why she chose to engage in this behavior Alisa said, "When she [Mrs. Baker] reads I pay attention because I think it might help me figure something out. Like I might know how to do one of the steps or what materials to use." However, Alisa explained that overall she entered her lab group not understanding what the lab said and not knowing what she was supposed to do.

Alisa was never observed asking her peers or Mrs. Baker to help her understand the procedural texts. Alisa explained that since the lab had already been read and discussed in class she should know what it meant. To ask questions about it she said would allow either Mrs. Baker or her peers to realize that she did not understand it. This, Alisa said "would be embarrassing." In addition, Alisa believed that asking questions would not help her comprehend the labs any better. She said, "I don't bother to ask [questions] about them 'cause I know it won't really help me."

In this situation Alisa's rationales for interacting with text were similar to Sarah's. Not only did she hold a negative perception about herself as a reader, but she also refused to ask her teacher or peers questions about the procedural texts or indicate that she did not understand it. Like Sarah, Alisa did not want anyone to perceive her as a poor reader or to know that she did not understand a piece of text. In both cases maintaining or trying to create an identity as a good reader took precedence over comprehending text.

The Influence of Perceptions on Assignments

Interviews and observations suggested that the ways in which each student used text to complete assignments

was influenced to some extent by their beliefs about themselves as readers. Sarah's approach with text in this context was to rely on one of three girlfriends for assistance. In interviews, Sarah explained that when she had questions about text-based assignments she preferred to seek out help from one of her three friends rather than from her teacher, Mrs. O'Reilly. This decision was based on Sarah's concern that other students might hear her asking Mrs. O'Reilly for help and realize she did not understand the text. She explained that, "I wouldn't really want to ask Mrs. O'Reilly [for help]. If I ask her in a low voice she'd ask me, 'What?' and I'd have to say it really loud. Then they [the other students] would find out."

Sarah went on to explain that she knew most of the questions she had about the text were easy and that they were all questions that she, as a sixth grader, should already know the answer to. To ask for help, she said, was embarrassing. Sarah indicated that she could count on her three friends to help her, to not make fun of her, and to not reveal her inabilities to other classmates.

As stated earlier, both Alisa and Nicole believed that they did a good job comprehending the textbook. Though they held the same belief, both girls approached working with their textbook in different ways. Alisa was observed regularly referring to her textbook as she completed assignments. During the study she was observed asking Mrs. Baker eight questions about either the text or the related assignment. Mrs. Baker always answered these questions and Alisa never indicated that she needed further assistance or that the answers were unsatisfactory.

Unlike Sarah, this small number of questions did not appear to be tied to any images Alisa wanted to promote or hide about herself as a reader. Instead, this small number of questions may have been due to the fact that Alisa believed the assignments were not difficult to do. She explained that assignments that required her to define vocabulary words were easy because, "I go to the back of the book. That's where all the definitions are in the glossary. That's where I get them and I write them down." She also felt that answering comprehension questions was easy if the answers could be found in the textbook:

They're easy [the comprehension questions] if it's in the book because all you have to do is copy down the whole sentence. If it's not in the book, if you have to describe and explain it, then it's hard because you have to put it in your own words. That's hard because I don't know what to put down.

This was an attitude shared by Sarah. Though Sarah believed she was a poor reader, she did state that assignments that required her to define vocabulary words and/or answer questions based on a piece of text were "pretty easy." Both students also used similar procedures for completing these assignments. Observations showed that Sarah and Alisa were able to locate the definitions of terms in their textbooks using the glossary. Once they located the definitions they copied them verbatim onto their papers. For chapter questions the girls explained that they would look through the chapter until they found key words from the question in the text. They would then copy the sentence/sentences that contained these key words. Both girls stated that they skipped questions that could not be found directly in the text. This strategy was highly successful for them. When completing these types of assignments, Sarah maintained a B average at 83% while Alisa had a C average of 76%.

Alisa's behaviors and rationales towards using text changed when she was expected to read labs in her science class. As stated earlier, Alisa believed that she was not capable of comprehending these texts and that they were too difficult to understand. This perception influenced how she approached interacting with them when she was expected to complete assignments.

Though she recognized that she had problems comprehending these texts, Alisa did not ask questions about it or indicate that she did not understand it. In addition, she was never observed rereading the text when working on any of the labs or discussing the text with any of her group members. Alisa explained her rationale for not engaging in these behaviors:

I don't do well in labs. They're really hard. I don't understand them, and I just mess up all the time. I figure the best thing to do is pay attention when we [the group] do them. That usually helps.

Observations showed that Alisa did appear to pay attention to what her group members did during the labs. Alisa always watched what her group was doing and/or participated in the lab if a group member told her what to do. Though Alisa repeatedly explained in interviews that she did not understand these texts or what to do once she was in her lab group, she did find ways to complete the lab assignments. Observations revealed that Alisa engaged in two behaviors when completing lab assignments: (a) writing down the answers as a group member said them aloud, and (b) watching her group perform the lab and attempting to answer the questions on her own.

During five of the 10 labs, Alisa was observed writing down answers whenever a group member stated them out loud. On these days, group members would do some work, state an answer, and then the cycle would repeat itself. Alisa never challenged or questioned these answers and may have assumed that they were always correct. In an interview she stated, “I usually get the answers from them [the group members]. They will just do the labs and stuff and they’ll just tell me and I’ll just write it [the answers] down.”

During the remaining six days, Alisa watched the group members perform the lab and then attempted to answer the questions on her own. Group members did not announce any answers on these days and Alisa did not ask them to provide her with answers. Alisa explained that she had trouble completing the lab assignments in this situation. She stated:

It’s hard because the answers aren’t in the book [the textbook]. You have to watch and pay attention and then try to put it [the answer] in your own words. And that’s pretty hard because I just don’t know what to put down.

Alisa’s grades on her lab assignments were lower when group members did not state the answers out loud. When she was expected to determine the answers on her own, Alisa’s average grade was a 58% (an F). When she was able to obtain the answers from her group, her average grade was an 88% (a B).

Nicole’s approach and rationales to using text were different. Like Alisa, Nicole believed she understood the textbook and was good at mathematics. She explained, “I’m pretty good at math. Sometimes I have questions about the assignments. When I do then I ask for help. Then I understand.”

Nicole was observed asking for help with her assignments on 22 days. During this time, she posed a total of 30 questions to her peers and 18 questions to Mrs. Harding. Nicole explained that the only reason she directed more questions to her peers than to Mrs. Harding was because of convenience:

It’s easier to ask someone at my table because they’re right there. Sometimes I’ll ask Mrs. Harding questions, but not as much because I have to get up and go to her desk. And I’m just lazy. I don’t have to go anywhere if I ask someone at my table.

Though Nicole may have believed she understood the text, 47% of the questions she posed were about comprehension questions whose answers could be found in the text. However, none of Nicole’s questions indicated that she did not understand what the text meant. Instead Nicole asked her teacher or peers to help her locate the answers to the assignment questions.

Nicole also did not seem to recognize that she should use the text to help her locate the answers. Observations showed that she rarely consulted the text when working on any of her assignments over the 45 days they were given. When working on assignments, Nicole was observed looking back at the pages that accompanied them on seven occasions. She explained that she rarely needed to engage in this behavior because she had read the text once and understood it. Therefore, Nicole said that there was usually no purpose to reread any or all of it again.

What It Means To Be a Successful Reader

Sarah, Nicole, and Alisa each had developed ideas about what it meant to be a successful reader of text and their abilities to meet this standard. For Sarah, the above data suggests that she believed good readers compre-

hended text with little to no difficulties and were generally able to follow along and keep up with readings and discussions in class. Sarah appeared to feel that she was not successful in these areas and did not seem to believe that she was capable of becoming a good reader in the future. In this case, the only tangible success for Sarah was preventing other students from finding out that she had comprehension difficulties, something that she stated she was able to maintain.

Interviews with Nicole and Alisa suggested that they shared some of Sarah's views. Both seemed to believe that being a successful reader meant comprehending the text with few problems. However, both Nicole and Alisa measured their comprehension abilities based on grades. For Alisa, this allowed her to believe that she was able to comprehend the textbook, but not the labs. Alisa recognized that she was only able to pass lab assignments when she copied answers from the students in her group. Though Alisa also explained that she copied answers directly from the textbook, and that she could not answer questions not found directly in the book, she did not see this as a sign of failure to comprehend on her part. While there is no data that provides an explanation for this, one possible reason is that Alisa felt successful in reading the textbook because she located the answers on her own, using the book, and with little assistance.

Nicole also based her reading abilities on her grades, an issue that was problematic given the grading policy in her classroom. Nicole's math teacher, Mrs. Harding, graded all assignments, quizzes, and tests. However, given that (a) all homework assignments were automatically given a 100% for completion and (b) all quizzes and tests could be retaken, the way in which grades were calculated did not appear to be an accurate measure of how well Nicole comprehended the text. Across all four grading periods, Nicole's test average was an 88%. Her quiz average was an 80% and her homework average was a 94%. However, before retaking quizzes/tests, Nicole's average quiz grade was 72% and her test average was a 69%.

Interviews with Nicole suggested that she did not take into account what her original grades were on quizzes/tests or how many problems she got wrong on a homework assignment. Instead, my conversations with Nicole suggested that she based her conclusions that she was able to comprehend text on the final grade that went on her report card.

Comprehension Assessment Results

The results from the comprehension assessments showed that none of the students improved as readers of the text in the class in which they were being studied. Each student started and ended the year reading at the same level at which she had begun. In addition, each student showed that she was capable of answering only questions that could be found word for word in the text. The students were not able to answer high-order thinking questions that required them to analyze and/or make inferences. The results of these assessments suggest that the students' abilities to go beyond stating basic facts may be limited. It also raises questions about how well they understood the material they were expected to learn from texts and how well they may have been able to apply and use this information both in and outside of school.

Discussion

Student Identity and Reading

These cases add support to the theory that students' interactions with text may be based on their socially situated identities, how they perceive themselves as readers, and how they want others to view them (Dillion & Moje, 1998; Gee, 1996; McCarthey, 1998; McCarthey, 2002). This suggests that students are less likely to engage with text if they hold a negative image about themselves as readers, and are more likely to interact with it if they believe they are good readers. Though it might be expected that struggling readers would hold negative connotations about themselves, both Nicole and Alisa demonstrated that they believed they were good readers who could comprehend at least some of the text found in their classroom. However, observations of both students also suggested that they may have had comprehension difficulties that they were not aware of.

These ideas expand on what we know about struggling readers. Though it has been suggested that struggling readers may behave in a helpless manner when they encounter text (Johnston & Winograd, 1985), Alisa and

Nicole's cases suggest that struggling readers may engage with difficult text if they believe they can be successful at comprehending it. However, Sarah's case suggests that not all struggling readers will view themselves in a positive light and/or want to try to comprehend difficult text. Though teachers may supply students like Sarah with a variety of strategies they can use to increase their comprehension, their views about themselves as readers may have a strong influence over their behaviors and interactions with texts.

Nicole and Alisa's understanding that they were good readers has specific implications for how teachers might think about providing struggling readers comprehension instruction. Struggling readers who do not recognize that they have comprehension difficulties may not understand and/or believe that they need to apply specific strategies to help them understand text. Therefore, it is important that teachers be aware that these students may need some additional help in becoming more meta-cognitive about what they read and the degree to which they understand it. In addition, teachers may wish to take into account students' identities and beliefs about themselves as readers and how this affects the ways they approach text.

Defining Success

Findings from this study support the theory that students will construct their beliefs about themselves as readers based on their interactions with text, students, and teachers (Mishler, 1999; Ruddell & Unrau, 1994; Santa Barbara Discourse Group, 1994; Sarup, 1996; Tatum, 1997). Students whose interactions suggest that they are comprehending text and doing well on assignments may construct the belief that they are good readers and/or have few comprehension problems. They may also believe that they are learning the information that they read about in texts. Students who experience consistent problems in these areas may feel that they are poor readers and/or that they have been unable to learn from text.

Alisa's interactions helped to support two separate beliefs about herself as a reader of science text. First, her belief that she could comprehend information text was based, to some extent, on the grades she received for assignments that accompanied it. These assignments allowed Alisa to answer factual questions from the text. Alisa was able to locate and copy these answers verbatim from the text. Since her teacher accepted these as correct, Alisa assumed that she understood what she had read. However, Alisa recognized that she had difficulty answering high-level thinking questions and could not complete assignments herself that were related to procedural text. These experiences helped Alisa to construct the belief that she was a poor reader in some contexts of her science class but a good reader in others.

Nicole's case also demonstrates that some students are capable of moving through the school system without learning content and without improving their abilities as readers. Yet because these students have met an individual teacher's or school's definition of success, their lack of understanding and/or reading difficulties may go unnoticed. Their problems are masked by their abilities to engage with the system they are a part of. While some students may consciously understand how to manipulate such a system to be labeled successful, others, such as Nicole, may participate without the full knowledge of what is taking place.

Teachers may not realize that the experiences struggling readers have in class can: (a) help to support their beliefs about themselves as readers and (b) potentially create false impressions of how well they have comprehended text and learned content. Though Alisa's science teacher, Mrs. Baker, believed that Alisa had comprehension problems in spite of the regular occurrence of passing grades, Alisa did not recognize this. Therefore, this may explain why some struggling readers do not seek assistance from others when interacting with text. They may feel, and have evidence to support, that they do understand and are learning what they are reading.

Questions for Future Research

Findings from this study suggest that struggling readers' interactions with text are not based solely on (a) the difficulty of a piece of text and (b) their cognitive abilities as readers. While both of these issues can contribute to how struggling readers approach text, how a student perceives him/herself as a reader also appears to play a significant role. Though students may have developed, and might even be able to articulate, their identities as readers and how this influences their actions with text, teachers may not be aware of this. Therefore, future research may wish

to focus on (a) how to help teachers become aware of students' identities as readers and (b) how to interact with students once they have this knowledge. In addition, research may also want to take into consideration how teachers' understandings of students' identities affect the ways in which they work with students as well as the impact that such understandings can produce in teacher/student interactions around text and reading instruction.

Endnote

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