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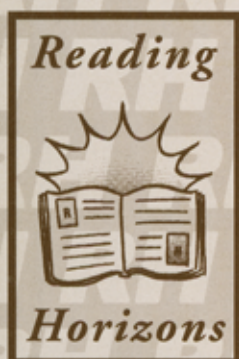
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Dorothy J. McGinnis Reading Center and Clinic
College of Education
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A Journal of Literacy and Language Arts

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Reading Horizons

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There is no more crucial or basic skill in all of education than reading.

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Assessing the Metacognitive Dimensions of Retrospective Miscue Analysis Through Discourse Analysis

Wendy L. Black
Illinois State University

This study investigates the manner in which retrospective miscue analysis involves metacognition by analyzing the discourse of weekly retrospective miscue analysis (RMA) sessions conducted with a fourth grade reader over five months. A preliminary structural discourse analysis of the sessions reveals several procedural and format features of the sessions. Each session more or less involves the same broad procedures: a) establishing the purpose and setting the agenda; b) discussing the individual miscues; and c) reflecting on reading or what was learned in the session. Discourse analysis of participants, discussions, and reflections reveals discourse moves that involve metacognitive experiences producing metacognitive knowledge in three domains: procedural knowledge, conditional knowledge, and declarative knowledge. Specific discourse moves that accomplish the metacognitive knowledge are examined.

READING STRATEGY instruction is a mainstay in elementary classrooms and essential to support struggling readers. Practices such as *guided reading* (Fountas & Pinnell, 1996) and *reciprocal teaching* (Brown & Palincsar, 1986), which highlight for children a repertoire of reading and comprehension strategies, are widely integrated into elementary reading programs. These instructional strategies are intended to teach readers to use particular strategies while reading, whether or not the readers are aware of the strategies they currently use. Another instructional strategy, called retrospective miscue analysis (RMA), uniquely provides teachers and readers a model of inquiry to reading strategy use by examining their oral reading miscues. In RMA young readers are invited to become metacognitively aware of and celebrate their own strategy use as well as to develop additional useful strategies.

This study investigates the manner in which retrospective miscue analysis involves metacognition by analyzing the discourse of weekly RMA sessions conducted with a fourth grade reader over five months. The bulk of the growing literature on RMA consists primarily of case studies of teachers' and learners' experiences demonstrating RMA's impact on its participants. With the current emphasis in reading instruction on metacognitive awareness of reading strategies, I am seeking to discern what we truly mean by metacognition and to understand how the discourse in discussions about an individual's reading processes create metacognitive experiences. If it is true that awareness of reading cues and strategies creates a self-extending system through which readers construct meaning, then it is important to understand how conversations such as these bring effective reading strategies to a conscious awareness.

Retrospective Miscue Analysis

In an RMA session a reader discusses his/her miscues with either an educator or group of peers in a type of collaborative discourse analysis of the oral reading miscues from a previously-recorded oral reading. Participants analyze collaboratively the miscues that the reader made, revealing the reading process, the specific reading strategies, and the reading cues the reader used. This cooperative investigation creates a window into the reader's process by providing the reader the opportunity

to explain individual strategies and thought processes during reading and by socially co-constructing with participants an understanding of the reading process. It also encourages readers to discover for themselves that reading is a meaning-making process through an exploration of:

- why they might have made miscues
- if and how miscues affected their understanding of the text
- whether or not miscues were, or need to be, corrected (Goodman & Marek, 1996)

For two decades retrospective miscue analysis (RMA) has engaged young and adult readers in explorations of their own oral reading miscues that resulted in metacognitive awareness of their personal reading strategies, metacognitive knowledge of reading processes, and metacognitive experiences of revaluing themselves as readers (Costello, 1992, 1996; Germain, 1998; Goodman & Marek, 1996; Hajny, Strebel & Stiles, 2001; Martens, 1998, Worsnop, 1996). RMA involves metacognitive awareness about written language and about the reading process. Knowledge and understanding of metacognition itself and metacognition as it relates to reading provides insights into the processes involved in RMA.

I examined the discussion sequences and questioning techniques in six RMA sessions to determine:

- in what manner is RMA a metacognitive enterprise?
- what metacognitive knowledge about reading surfaced in discussions?
- what metacognitive procedures were used?

Definitions and Categories of Metacognition

The purpose of this study is to identify the manners in which RMA is a metacognitive enterprise and creates metacognitive knowledge of reading processes. The following review of literature on metacognition offers a theoretical perspective for metacognition. The section summarizes concepts of metacognition developed throughout the past

three decades and highlights categories of metacognition that have been applied to reading.

Flavell's (1979) seminal article on metacognition clarifies the conceptual distinctions between *metacognitive knowledge*, and *metacognitive experiences* and explains their interaction with goals (or *tasks*), and actions (or *strategies*). His developmental-educational perspective is consistent with that of RMA in thinking and talking about one's own reading process.

Metacognitive Knowledge

Flavell establishes a definition of metacognitive knowledge:

Metacognitive knowledge is that segment of your (a child's, and adult's) stored world knowledge that has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, action and experiences. An example would be a child's acquired belief that unlike many of her friends, she is better at arithmetic than spelling. (p. 906)

Metacognitive knowledge consists primarily of knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of cognitive enterprises. (p. 907)

Flavell distinguishes three categories of factors about which people hold beliefs and knowledge:

- *person*
- *tasks*
- *strategies*

"The person category encompasses everything that you could come to believe about the nature of yourself and other people as cognitive processors" (p. 907). This category includes beliefs about intra- and interindividual differences and universal tendencies. First, when individuals express their belief of being better at one cognitive task than

another, they are expressing *intraindividual* differences, such as "I'm better at multiple choice items than fill-in-the-blank items on tests." *Interindividual* differences might be reported as a comparison of one's own cognitive abilities with another's as in the example, "I am better than my friends at arithmetic." Flavell labels *universal* more general knowledge such as the idea that the material one wants to remember needs to be read more carefully than texts read for enjoyment. Hence, metacognitive knowledge about *person* can refer to interindividual difference, intraindividual differences, or universals.

According to Flavell, a second factor of metacognitive knowledge is the "task demands or goals." For example, "The child will come to know that some cognitive enterprises are more demanding and difficult than others, even given the same available information" (p. 907), or that material on a familiar topic is easier to remember than material on an unfamiliar topic.

The last factor Flavell discusses relates to strategies. He states, "... there is a great deal of knowledge that could be acquired concerning what strategies are likely to be effective in achieving what subgoals and goals in what sorts of cognitive undertakings" (p. 907). For instance, skimming a text helps to locate answers to specific questions about its content.

These three factors (person, task, and strategy) necessarily interact with one another. Flavell states, "... most metacognitive knowledge actually concerns interactions or combinations among two or three of these three types of variables" (Flavell, 1979, p. 907). For instance, if I am studying for an exam covering detailed material from a text (task) I know that developing a written outline (strategy) for it will help me, but not my classmate who remembers material better with verbal rehearsal (person, strategy). This involves person + strategy + task where I believe that, unlike my classmate, I should use the strategy of outlining as opposed to verbal rehearsal in the task of preparing for an exam based on text content.

Flavell proposes, "metacognitive knowledge is not fundamentally different from other [kinds of] knowledge" (p. 907). Metacognitive

knowledge, like other knowledge, can be declarative and some can be procedural. It may be intentionally activated in the search for a strategy within a task situation or activated automatically by cues within the task. He cautions that also like other knowledge, individual's metacognitive knowledge can be flawed, inaccessible even when it is needed, or fail to be useful altogether when acted upon. Finally, metacognitive knowledge can lead you to select, evaluate, revise, and abandon cognitive tasks, goals, and strategies in light of their relationships with one another and with your own abilities and interests with respect to that enterprise. Similarly, it can lead to any of a wide variety of metacognitive experiences concerning self, tasks, goals, and strategies, and can also help you interpret the meaning and behavioral implications of these metacognitive experiences. (Flavell, 1979, p. 908)

One of the purposes of RMA is to enhance a reader's metacognitive knowledge about the reading process and the strategies that are available in the reader's own repertoire. With this knowledge the reader can, as stated above, select, evaluate, revise, or abandon strategies in the process of reading.

Metacognitive Experiences

Metacognitive experiences occur as a cognitive regulation of intellectual practices. Flavell (1979) explains:

Metacognitive experiences are any conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise. An example would be the sudden feeling that you do not understand something another person just said. (p. 906)

Metacognitive experiences can be brief or lengthy in duration, simple or complex in content. To illustrate, you may experience a momentary sense of puzzlement that you subsequently ignore, or you may wonder for some time whether you really understand what another person is up to. These experiences can also occur before, after, or during a cognitive enterprise. (p. 908)

A metacognitive experience may occur before, during, and after reading. Before reading one might experience a conscious sense of relief that the text appears to be in a preferred, familiar format. During reading, a reader may realize that underlining important names or dates will assist in remembering them for an upcoming quiz. After reading, a reader may notice boldface subheadings which will help to guide further studying of the text (Garner, 1987). One well-known metacognitive experience is the "tip-of-the-tongue" phenomenon, discussed by Flavell and Wellman (1977), when an individual knows that she knows an item of information, such as a name, but cannot recall it. In this experience, monitoring of the knowledge occurs without the knowledge being activated. Similarly, after reading the reader may know that he knows but cannot recall the setting, the name of a character, or perhaps the motive for a character's actions.

Flavell (1979) elaborates that "many metacognitive experiences have to do with where you are in an enterprise and what sort of progress you are making or likely to make" (p. 908). For instance, a reader may suddenly realize that she has been reading along in a text without making any sense of it or an individual may feel that he is not adequately explaining directions to a friend. In some cases metacognitive knowledge overlaps with metacognitive experiences. Flavell describes them as "items of metacognitive knowledge that have entered consciousness" (p. 908). In other words, the metacognitive knowledge that a person has about a particular situation enters into the individual's conscious awareness, creating the metacognitive experience. Furthermore, once a metacognitive experience occurs, it may guide further cognitive activity. For example, a sudden awareness that you are not making any sense of the text may result in rereading the previous page of the text. Awareness of cognitive processes involved in thinking is a fundamental aspect of metacognition.

Such metacognitive experiences may not only have effects on subsequent cognitive tasks or goals, but also add to, delete from, or revise one's current metacognitive knowledge base. Flavell proposes that metacognitive experiences "play a major role" in the development of metacognitive knowledge. On the other hand, he writes that some metacognitive experiences may not have metacognitive knowledge as

their content and some knowledge may never surface into a metacognitive experience.

As in the reader example above, metacognitive experiences (suddenly realizing meaning has not been constructed) activate strategies (rereading), especially when they occur when cognition seems to fail in some way (sensed by confusion or doubt). Strategies, according to Flavell, are then used to make cognitive progress. Cognitive strategies like rereading are aimed at making cognitive progress. Metacognitive strategies, however, are used to make metacognitive progress, like self-testing on content knowledge can be used to monitor your own knowledge of the material. Thus, the action of monitoring one's own "cognitive enterprises proceeds through actions of and interactions among metacognitive knowledge, metacognitive experiences, goals/tasks, and actions/strategies" (p. 909).

Metacognition and Reading

Related specifically to reading, metacognitive knowledge has been further organized into three subcategories (Billingsley & Wildman, 1990; Jacobs & Paris, 1987; Paris, Lipson & Wixson, 1983):

- procedural
- conditional
- declarative knowledge

Table 1 presents the three aspects of metacognitive knowledge related to the processes of reading.

Procedural knowledge is an awareness of the processes necessary to complete a strategy or task. "For example, a student could know *how* to skim, *how* to use context, *how* to underline, *how* to summarize, or *how* to find the main idea while reading" (Jacobs & Paris, 1987; emphasis in original). Thus, procedural knowledge involves an understanding of the task at hand, knowing of and selecting an appropriate strategy, and knowing how to do it.

Table 1

Metacognitive Knowledge in the Reading Process

| <u>Knowledge Type</u> | <u>Knowledge Characteristics</u> |
|-----------------------|---|
| Procedural Knowledge | Specifying the task Selecting the most appropriate strategy Knowing the steps to perform strategy |
| Conditional Knowledge | Knowing reasons strategies are helpful Knowing contexts in which to use strategies |
| Declarative Knowledge | Task Awareness <ul style="list-style-type: none"> ◦ Identifying beliefs about the task ◦ Setting goals ◦ Responding to information ◦ Understanding text structure ◦ Knowing about different types of text Task Analysis <ul style="list-style-type: none"> ◦ Realizing certain strategies are needed ◦ Determining level of importance of information ◦ Allocating extra attention to information deemed important ◦ Adjusting actions to different task situations Strategy Awareness <ul style="list-style-type: none"> ◦ Knowing possible strategies to use ◦ Realizing when a strategy is helping Performance Awareness <ul style="list-style-type: none"> ◦ Realizing when successful at learning or understanding information |

Note. Adapted from Davenport, 1993, p. 81.

Conditional knowledge is an awareness of the conditions that influence the effectiveness of strategies in different contexts (Billingsley & Wildman, 1990; Jacobs & Paris, 1987). In other words, readers with conditional knowledge know “*why* strategies are effective, *when* they should be applied and *when* they are appropriate” (Jacobs & Paris, 1987). Strategic readers know when and why certain strategies are most appropriate for different reading purposes and learning situations (Baker & Brown, 1984; Goodman, 1994; Paris et al., 1983).

Declarative knowledge is best explained in terms of the three aspects of metacognitive knowledge introduced earlier in Flavell’s (1979) work: task, strategy, and person. It encompasses the knowledge and beliefs readers have about the characteristics of the text, the reading task, themselves as learners, and possible strategies that can be employed. For example, a student might know that prior knowledge of the topic influences reading speed and comprehension (Jacobs & Paris, 1987) or know the relative importance of various information provided in the text. Some models of metacognitive knowledge separate knowledge about different types of reading tasks (referred to as task knowledge) from knowledge of aspects of a particular reading task (referred to as task analysis) (Baker & Brown, 1984; Wade & Reynolds, 1989). Task awareness involves identifying beliefs about a reading task, recognizing a text structure, and knowing about different types of texts. Task analysis involves specifying that certain strategies are needed, determining the relative importance of information, and knowing that adjustments will need to be made for different task situations.

The next domain of declarative knowledge, strategy awareness, is the knowledge that a particular strategy or strategies will be useful (Wade & Reynolds, 1989). For example, a reader may know that the strategy of skimming will provide information about the gist of a text and that the strategy of rereading particular sections of a text will assist in recalling details. It is with this type of knowledge that readers can make decisions about which strategies are most appropriate for each text and each task.

The last domain of declarative knowledge is performance awareness, which relates to Flavell’s notion of awareness of the

knowledge that a strategy is being useful. In other words, it is the knowledge of whether or not a strategy performed during reading was successful in the reading task. Strategic readers evaluate the effectiveness of a strategy based on whether it helped them understand what they read (Baker & Brown, 1984; Paris et al., 1983; Wade & Reynolds, 1989).

Method

Participants

Two educator-researchers engaged in series of weekly RMA sessions for five months with Zach (a pseudonym), a fourth grade student, who was referred to them as a struggling reader who would benefit from their support. They had been closely involved in developing and studying RMA in several instructional settings (see Goodman, Marek, Costello, Flurkey, Wizinowich & Brown, 1989). The RMA team stated several purposes for conducting RMA sessions. They sought to provide support for the strategies and cuing systems that Zach was already using as evidenced by his oral reading and their analysis of his miscues. In other words, they wanted to not only revalue (K. Goodman, 1986,1996; Y. Goodman, 1996) his reading process by demonstrating effective strategies through the co-analysis of Zach's miscues, but also inspire Zach to revalue himself, and develop a better self-concept as a reader. In addition, the RMA team intended to provide instruction about reading strategies involved in the reading process by illuminating Zach's and other readers' strategies and cuing systems. In so doing they hoped to encourage Zach to continue to use his own strategies as well as integrate other effective reading strategies.

Procedures

In this study, the discourse of six of the eleven RMA sessions are analyzed. By examining the features of each session, I set selection criteria for a representative sample of sessions. Each session would:

- discuss the miscues of one story reading at one sitting
- involve the three participants consistently
- include discussion of at least five miscues

The first two sessions would be critical in observing how the RMA leaders framed and set purposes for RMA sessions with the reader. Also, they introduced essential vocabulary—language about the reading process and reading strategies—which allowed metacognitive discussions to occur. Thus, in addition to these two sessions, four RMA sessions were transcribed for analysis. The discourse of RMA sessions conducted throughout a semester was analyzed to identify the organization and metacognitive elements inherent in retrospective discussions. Each session was transcribed verbatim for structural and conversation analysis (Gumperz & Berenz, 1993). A structural analysis was conducted by mapping instructional conversations (Green & Wallat, 1981) of each RMA session in to phases, instructional sequences, interaction units and message units. This analysis revealed the organization of RMA sessions. Then, conversation analysis involved labeling each message unit according to its function as a speech act move. It assisted in examining speaker intentions and in observing relationships and patterns among moves (Gumperz, 1992; Ramirez, 1988). Once I established instructional sequences (ISs) and moves, further categorical analysis resulted in the development of categories related to the purposes of RMA sessions and to metacognitive dimensions they served.

Analysis of RMA Sessions

Organization of RMA Sessions

A preliminary structural discourse analysis of the sessions reveal several procedural and format features of the sessions. The first two sessions establish procedures and vocabulary to discuss miscues located at different points in the text. The third selected session involves the participants analyzing miscues within close proximity in longer segments of the text. The second set of three sessions introduces a new format which involved analyzing another reader's miscues occurring in the same stories Zach read. The miscues of the other reader are analyzed before Zach's miscues are discussed and compared.

Each session more or less involves the same broad procedures:

- establishing the purpose and setting the agenda
- discussing the individual miscues
- reflecting on reading or what was learned in the session

The beginning of the RMA sessions generally focus on establishing rapport and setting the context for the sessions. Setting the context may involve recalling the story read for the session, reviewing terms such as "miscue" or concepts such as predicting, checking on the understanding for the purpose of conducting RMA sessions, and/or setting the agenda for the day's session. After establishing the context, the participants analyze the selected miscues.

The procedures the team uses to discuss miscues--locate the section of text, read the section, listen to the tape, discuss the miscue, generalize and revalue--are repeated for each new miscue they discuss with some variability. In some phases generalizing does not occur

Once they exhaust the miscues (or time) for a given session the researchers close them in a reflective manner. Every session, except one, includes an instructional sequence in which the researchers recall with Zach the reading strategies they highlight in the session. As sessions progress, the researchers ask Zach to list them cumulatively. Overall, the closing phases leave the session on a positive note, focusing on Zach's effective reading strategies.

Co-constructing metacognitive awareness of reading

After reviewing the stated purposes of the RMA sessions, as well as literature on interactional analysis of instructional events (Farrar, 1988; Johnson, 1979; Bellack, Kliebard, Hyman & Smith, 1966) I established a set of guiding categories to directly relate the discourse of each RMA session to their specific purposes:

- Discourse moves providing revaluing
- Discourse moves providing instruction
- Discourse moves encouraging Zach's strategy use

First, I placed relevant excerpts of the transcripts into these three categories. Then, I analyzed the relevant excerpts further to determine the types of statements and questions the team uses to accomplish their three main purposes. I found that the team uses position statements about readers and reading and “you-declaratives” about Zach’s reading process to both provide instruction and revaluing.

The ensuing discussion describes the statements used in the three types of discourse moves to accomplish the team’s goals. It also includes an analysis of how these statements and questions create metacognitive knowledge and experiences. Discourse moves providing revaluing create metacognitive knowledge relating to *person* and to *task* and *strategies*. Discourse moves providing instruction create metacognitive knowledge relating to *tasks* and *strategies*. Discourse moves encouraging Zach’s strategy use create metacognitive knowledge relating to *strategies*. All three types of moves address *procedural*, *conditional*, and *declarative* knowledge to varying degrees.

Statements used: Position statements and “you-declaratives”

Two primary sets of statements are used in the instructional and revaluing discourse of RMA sessions. As part of their explanations about reading strategies, the team makes position statements regarding miscues, good readers, and specific reading strategies. With these statements they make explicit their positions on effective reading strategies, efficient reading practices, and the characteristics of proficient readers. Another way to highlight and explain Zach’s knowledge, use of cuing systems, and reading strategies is with a set of statements that I labeled “you-declaratives.” These statements are propositions stated as observations by addressing Zach directly as “you” as in “It didn’t sound right to you so you self-corrected.”

Position statements

The RMA team members make several position statements about reading and readers in each RMA session. These statements are used to provide both instruction and/or revaluing depending on the discourse

stretch in which it is embedded. Position statements consist of three categories:

- miscues
- good readers
- specific reading strategies

In RMA sessions 1 and 2, team member 1 (T1) introduces the concept of 'miscue' making the following position statements:

RMA-1

T1: Did you know that all readers do these kinds of things? Make those kinds of mistakes? Everybody. That's why we call them miscues. And we want you to know that that's a good thing to do. There's some mistakes that don't help us. But most, many mistakes are good mistakes.

RMA-2

T1: . . . we believe that not all miscues are bad and that some miscues are good when you read. Everybody who reads makes miscues. And that doesn't mean you're a bad reader, it means you're a good reader. Especially if you can fix the ones that are a problem.

During later sessions T1 reiterates his position about miscues:

RMA-6

T1: The miscues don't mean that you're a bad reader! Miscues tell us good things about readers. But we can tell from miscues what... smart things you do.

RMA-8

T1: And by the way, lots of miscues that we make as good readers we don't notice. We don't even know that we make them.

RMA-9

Synthesizing a questioning cycle about why a miscue is a good one.

T1: So those words mean the same, and the story means the same, and the sense is the same, and you said all those things, right?
And it sounds good, it sounds like language.

By stating their position about miscues, the team brings to metacognitive awareness the knowledge that readers make miscues whether or not they realize it, and the knowledge that not all mistakes, or miscues, are bad. In the RMA-9 example, T1 explains the criteria for what is considered a good miscue: one that sounds like language and retains the meaning of the story.

The second type of position statement the team members use in RMA sessions are about good readers. The position statements they make about good readers and typical readers occur after they determine the strategies or cues Zach was using to make a particular miscue. The statements convey the idea that good readers make miscues and use the same strategies and cues that Zach does. The position statements they make include:

- Good readers self-correct (RMA-1)
- everyone who reads makes miscues (RMA-2)
- everybody makes predictions (RMA-4, 6)
- all readers have some problems (RMA-4)
- Yetta, an expert reader, makes miscues (RMA-6)
- everybody has to deal with reading like Zach does (RMA-6)
- natural readers use everything they know about reading (RMA-6)

- everybody gets into trouble when they read sometimes (RMA-6)
- everyone has to learn new words all the time (RMA-6)
- when good readers come to something that doesn't make sense they go back and self-correct (RMA-8a)
- good readers don't stop, wait or try it five or six times, they put what they think is there. If they know it's important it'll come up later, if it's not important it won't come up again and [they] just keep going (RMA-8b)
- good readers make miscues they don't even know about (RMA-8c)

These position statements explicitly create interpersonal metacognitive knowledge about readers and universal metacognitive knowledge (Flavell, 1979) about the strategies effective readers use. Statements explaining what good readers do as in RMA-1, RMA-4, RMA-6, and RMA-8, provide procedural knowledge of the strategies they use. They also demonstrate declarative knowledge of task awareness, strategy awareness and, in RMA-8a and RMA-8b, task analysis as the 'good reader' decides what is important, realizes what strategies are needed, and adjusts actions to different task situations.

The third type of position statement the RMA team members make in instructional discourse, and by far the position statements they make most often to Zach, is about reading strategies that he uses and the importance of making sense. They are presented below by strategy:

Self-Correction: Self-correction is a smart thing to do. When the miscue bothers you, you self-correct. If a prediction does not work you should self-correct it. Self-correcting is not 'messing up'. When good readers come to something that does not make sense they go back and self-correct.

Prediction: Predicting is very smart. Predicting is a good thing to do when you are reading. It is important to guess what a word is even if you do not know. Because it helps

you with the other information in the story that you are reading. If a prediction does not work, you should change it (self-correct) all by yourself. Prediction is something we always do when we read.

Substitution: If I see a name I just say 'so-and-so' and keep reading. Substituting a name is not a mistake; it helps you get on with the story.

Keep going: As long as you are understanding the story you keep going.

Making sense: The most important thing is to make sense. The important thing is to wonder 'what could that be?' Making sense is important. Understanding is the most important. The most important thing is to get the message. It's not as important to see if something looks good as it is to see if it makes sense. Making sense is most important, the most important strategy.

Some position statements also report general or typical reading situations as a means to illustrate the wide use of Zach's strategies that may otherwise be perceived by him to be a personal weakness in reading:

RMA-2

T1: And did you know that lots of times when you have names in stories you don't always know how to pronounce them. But sometimes when we spend too much time sounding out it takes us a while, we forget to understand the story. And all of those things give you cues to your words. If you're thinking about the story that gives you all kinds of clues.

RMA-4

T2: What we found out, Z, is that when people back up the way you did, to fix, usually they're thinking that something else was going to come in the sentence. But they looked and found out that the thing

they thought was going to come wasn't there, so they went back and fixed.

You did the same thing that *other* smart readers do.

RMA-6

T1: By the way that happens a *lot* when you read.

You first say to yourself, 'Hm, I wonder if that's what it is.'

Then you *check* it again.

And I call that confirming but you just *check* it and sometimes you *self-correct* when you do that and sometimes you don't have to and you *keep going*.

The position statements the team makes about miscues, readers, strategies, and typical reading situations appear to be primarily instructional, but also convey revaluing. Furthermore, positive statements about the very strategies they observe Zach to be using give Zach encouragement to continue to use them.

It is clear that the position statements about reading strategies creates metacognitive knowledge relating to interindividual similarities and strategies Zach and other readers use while reading. These statements also serve as explanations to illuminate procedural knowledge of selecting appropriate strategies, conditional knowledge of identifying beliefs about strategies and knowing the contexts in which to use them, and declarative knowledge relating to responding to information, identifying beliefs about reading, realizing when certain strategies are needed, adjusting actions to different situations, and realizing when a strategy is helping.

Propositional "you-declaratives"

Another set of statements, which simultaneously explain and revalue the reading strategies Zach use emerge as a category of its own, I label "you-declaratives". These propositions about Zach's reading which implicitly positively evaluate his reading fall into the following categories.

You declarative/Observation: reporting what the team members observed Zach say while reading. e.g., You said 'cleaned' and then you said 'climbed out'.

You declarative/Explain: explaining processes that Zach was using and why he was using them. e.g., So that helped you look again. And you said, 'Hey, I wonder if that's Mr. or Mrs.'. And you checked again, and you saw the /s/ and so you said 'Mrs.'.

You declarative/Cognitive: stating what Zach knew (or must have known) to make a miscue or use a strategy. e.g., You *knew* it. You *knew* it was about the mom.

You declarative/Compare: making comparisons between Zach's and another reader's reading process. e.g., Gary did what you did. But you did even a better thing than Gary even though you're younger than Gary. Gary had to wait till he got all the way to the end of the sentence before he self-corrected. You just did it right away.

You declarative/Define: stating the strategy Zach used to provide a specific term to the strategy. e.g., You made a good prediction. You self-corrected, all yourself, in your own head.

These statements about Zach's reading strategies occur in every RMA session, usually at the end of instructional sequences (ISs) and always in revaluing ISs. The function of these statements appear to be to provide positive conclusions to the analysis of miscues by restating and defining what is observed, by explaining the possible reasons why strategies were used or miscues were made, by illuminating the knowledge Zach must have had in transacting with the text, and by making positive comparisons with other readers' strategies. In essence, they bring to a heightened metacognitive awareness what was most likely going on in his brain.

The explanation of what he was thinking provides examples of possible metacognitive experiences he had while reading (And you said,

'Hey, I wonder if that's Mr. or Mrs.' And you checked again, and you saw the /s/ and so you said 'Mrs.'). These types of explanatory statements permeated each RMA session to accomplish this awareness of thinking. The definition of the strategies provides language with which to name these cognitive processes while creating metacognitive knowledge of task and strategies. The declaratives which compare his reading to another reader obviously provides interpersonal metacognitive knowledge. These ISs which compare Zach's miscues with another reader's miscues from the same story are particularly effective in shifting Zach's perception of himself as a reader, according to the RMA team. They explain that, once he heard others – even T1-- make similar miscues, there was a positive shift in Zach's self-concept as a reader.

Questions Used

Introductory questions are used to establish the miscue(s) Zach hears while listening to himself or another reader read from the audio tape. *RMA questions* are posed to analyze the miscues according to their syntactic and semantic acceptability and to their graphic and phonic similarity to the text word(s). *Expansion questions* are asked to further explore the miscues, to determine strategies and cues Zach and the other readers used in reading, and to push Zach to support his observations with evidence and his opinions with justifications. *Revaluing questions* are posed to allow Zach to evaluate the acceptability of miscues, to revalue his reading strategies, and to provide the opportunity for him to state his self-concept as a reader.'

In my analysis I listed retrospective questions and tallied according to the questions recorded in RMA research as well as those unique to this study. The questions the team uses appear to depend on the instructional stance and the focus of each RMA session. For example, leading revaluing questions direct Zach to draw conclusions about the strategies he uses and about himself as a reader. In addition, questions which focus on naming strategies in RMA-2 differ from those which focus on, for instance, comparing another reader's miscues with Zach's in RMA-9. The most frequently used questions are probing questions relating to why Zach (or another reader) made a miscue (Why did you do that? . . . make that miscue?), and to evidence to support position statements (Why do

you think so?; How do you know?). These question types are undoubtedly leading Zach to bring his thinking to a metacognitive level and to use his developing metacognitive knowledge about reading and reading strategies to answer. Zach is asked to state his declarative knowledge relating to his beliefs about, and strategy awareness of, his reading process. The next most frequently used question inquires why Zach self-corrected particular miscues (Why did you correct that . . . change that?). This type of question invites Zach to recreate the metacognitive experience he may have had to self-correct, just as T1 illustrates earlier.

The findings suggest that particular questions may be more effective than others to bring awareness to different aspects of the reader's process. Questions leading to the analysis of the meaning-making capacity of a miscue (e.g., 'Does it make sense in the sentence?') will be more effective at evaluating the effectiveness of miscue. Or, questions leading to the analysis of the cuing systems used (e.g., 'How did you know that?') will be more effective at demonstrating the cuing systems involved in the reading process. Thus, it may be beneficial in instructional RMA sessions to select questions, as well as miscues, in advance of RMA sessions in accordance with a particular session focus.

Discussion:

Metacognitive knowledge and experiences in RMA sessions

The data show that the RMA sessions involved metacognitive experiences and a variety of metacognitive knowledge. The RMA team uses:

- position statements about reading and readers
- you-declaratives explaining and praising Zach's reading strategies
- question types inviting Zach to explain his thinking and reading processes

Metacognitive experiences

Metacognitive knowledge about a particular situation enters into an individual's conscious awareness, creating the metacognitive experience

(Flavell, 1979). In turn, metacognitive experiences may guide further cognitive activity. In the RMA sessions the team describe metacognitive experiences that Zach apparently had as he read, especially with you-declaratives. One example is when T1 proposes, 'And then you realized, "uh oh, that doesn't make sense," and then you self-corrected'. The current metacognition paradigm calls the process T1 describes as regulation or monitoring reading. She and her team member recall the processes by which Zach predicted, confirmed or disconfirmed and self-corrected when necessary, bringing to awareness the way he monitored his own reading. Thus, the researchers provide metacognitive experiences to discuss the cognitive processes of reading.

Metacognitive Knowledge

First, questions, position statements and you-declaratives create metacognitive knowledge as they convey and negotiate "knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of" the cognitive enterprise of reading (Flavell, 1979, p. 907). The participants discover intraindividual differences of Zach's different strategies within and across stories. The RMA team point out interindividual differences when they described and compared Zach's miscues and reading strategies with other readers who read the same texts and with 'good readers'. They also provide information in their discussions pertaining to reading universals about reading as a socio-psycholinguistic activity and make position statements about general knowledge and strategies used by readers, and good readers.

Three main areas of metacognitive knowledge are discussed in current research including procedural knowledge, conditional knowledge and declarative knowledge (Billingsley & Wildman, 1990; Jacobs & Paris, 1987; Paris, Lipson & Wixson, 1983). Procedural knowledge is an awareness of processes necessary to complete a strategy or task. Conditional knowledge is an awareness of the conditions that influence the effectiveness of strategies in different contexts. The declarative knowledge domain includes the following areas of awareness:

- of the learning or reading task

- of the potential learning and reading strategies that could be used to complete a given task or reading experience
- of the successfulness of the learning or reading
- of oneself as a learner and reader

The retrospective discussions about Zach's reading represent all three areas of metacognitive knowledge. The RMA team talks about meaning making and making sense as the 'goal' for reading and using particular strategies as the 'task demands' taken to construct meaning in transaction with text. On numerous occasions they highlight conditions that influence the effectiveness of strategies or cause potential problems. For example, in RMA-6 the researchers demonstrate the text's language was confusing to T1, causing her to reread. Also, the researchers point out to Zach that substituting a name is a more effective and efficient strategy than spending a lot of time sounding it out.

The first area in the declarative knowledge domain, task awareness, is represented in the categories of talk discussing and reviewing the strategies Zach used as highlighted by his miscues. Determining and discussing the specific strategies he used in reading examples and verbally listing those strategies at the end of RMA sessions brought to awareness the reading strategies Zach uses in the reading 'task'. Furthermore, position statements about readers also brought to awareness that all readers use the same strategies and have similar responses while reading.

The second area in the declarative knowledge domain, task analysis, is represented in the questions and discourse analyzing miscues. The analysis of Zach's and other readers' miscues bring to awareness not only the very thoughts Zach potentially had and reading strategies and cues he (and the other readers) used, but also highlight potential specific strategies that could be used within a repertoire of reading strategies and reading situations.

The third area in the declarative domain, performance analysis, is represented each time they discuss whether or not the miscue was 'a good thing to do', and whether or not it resulted in a sentence that made sense in the story. First, success in reading is based on whether or not the

reading made sense. Zach and the team comment openly about their beliefs concerning the degree to which a miscue or self-correction resulted in a successful, or meaningful, sentence.

The fourth area in the declarative domain, knowledge of oneself as a reader, is represented during discussions about Zach's self-concept as a reader. In this study, Zach demonstrates a shift in his self-concept as a reader and is able to compare his reading process with other readers. By choosing effective miscues and by pointing out the proficiency of the strategies, used the participants demonstrate their knowledge of Zach as a reader. The area of awareness that I did not find in the research literature on metacognition was others' concept of the learner or reader. The RMA team not only demonstrated their knowledge of Zach's strategy use, but they also consistently and openly stated their beliefs about Zach as an effective reader.

Implications: Benefits of Developing Metacognitive Knowledge

Flavell (1979) describes the benefits of metacognitive knowledge:

Meta-knowledge "can lead you to select, evaluate, revise, and abandon cognitive tasks, goals and strategies in light of their relationships with one another and with your own abilities and interests with respect tot that enterprise. Similarly, it can lead to any of a wide variety of metacognitive experiences concerning self, tasks, goals, and strategies, and can also help you interpret the meaning and behavioral implications of these metacognitive experiences." (p.908)

Analyzing other readers in comparison with his own reading enhances Zach's revaluing. The researchers report that after RMA-6 in which they analyzed T1's miscues, Zach's attitude and perception of himself as a reader changes. Furthermore, Zach has the opportunity to discuss miscues as indications of good reading strategies at work by analyzing 'Gary's' and 'Betsy's' high quality miscues. By taking the focus off of his own miscues, Zach realizes that all readers make miscues and use a variety of strategies in reading. Then the researchers help to make the connection through discussion that Zach also engages in the

same strategies as the other readers. After these sessions he more proudly lists the reading strategies he used.

The data suggests that analyzing other readers' miscues in addition to the focus-reader's is a powerful procedure. It may be beneficial to begin a set of RMA sessions by analyzing another reader's miscues to demonstrate and establish the positive nature of miscues before turning to the reader's own miscues. The reader may then be more likely to perceive his miscues as signs of good thinking rather than mistakes upon first analysis.

The most compelling evidence that Zach was developing a better self-concept as a reader was in his ability to list the reading strategies he uses while reading when the RMA team asks him to list them. They ask Zach to name all the strategies he can think of that they talk about in every RMA session except RMA-1. Zach lists an increasing number of strategies he uses with each session. Thus, intrapersonal and interpersonal metacognitive knowledge about use of reading strategies and cuing systems results in Zach revaluing himself as a reader. Analysis of his actual strategy use in subsequent readings may reveal an improved use of effective strategies. That is a question for further research. However, this metacognitive inquiry into his own reading processes for Zach leads to more confidence and revaluing, and increased strategy awareness.

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Teachers' Beliefs and Practices of Vocabulary Instruction With Social Studies Textbooks in Grades 4-8

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This investigation focused on the vocabulary beliefs and instructional practices of social studies teachers in intermediate and middle school grades as well as their use of teachers' manuals. Using a self-reporting survey to measure these beliefs and practices, we found some discrepancy between what teachers believe about vocabulary learning and their actual instructional practices for supporting vocabulary in teaching social studies. While their reported beliefs appear to mirror what is currently accepted as effective vocabulary instruction, their reported practices reflect more traditional notions like those found in many social studies textbook manuals. While all teachers surveyed held many beliefs and practices in common, three beliefs and three practices were differentially affected by grade level, economic status, or number of years of teacher experience.

OUR KNOWLEDGE OF VOCABULARY development is grounded in an extensive body of research that supports widely accepted practices of teaching new words to students. These efforts are based upon the universal belief that knowing word meanings is fundamental to understanding concepts presented in texts (Baumann & Kameenui, 1991; Nagy, 1988). Empirical studies indicating a positive correlation between students' vocabulary and comprehension support our common sense notion that we must teach words to help students understand what they read (Beck & McKeown, 1991a). As children reach intermediate and middle grades, vocabulary demands in content areas increase at a rapid rate and influence the network of ideas that are important for conceptual learning in all disciplines (Chall, Jacobs, & Baldwin, 1990). Critical factors, such as textbooks used in content area classrooms and the pedagogical knowledge base and belief systems of teachers concerning effective vocabulary instruction, can impact vocabulary teaching and learning in these different subject matter areas. In particular, this study examines how these factors might interact together to influence teacher decision making about vocabulary learning in intermediate and middle school social studies classes.

Textbooks, as major instructional tools, continue to prevail in content area classrooms (Alvermann & Moore, 1991; Moore & Murphy, 1987), and this use increases with successive grade levels (Goodlad, 1976). While teachers across disciplines and grade levels use textbooks in different ways (Irvin, 1998), teachers typically devote class time to textbooks, assign homework that is textbook-oriented (Woodward & Elliot, 1990), and use textbooks to make important instructional decisions (Muth, 1985). Yet, studies also have indicated that textbooks are difficult for students to read (Beck & McKeown, 1991b; Hill & Erwin, 1984; Sellers, 1988; Wade, 1983), offer too much information with little depth (Tyson-Bernstein & Woodward, 1989), and provide little guidance for helping teachers support student reading (Armbruster & Gudbrandsen, 1986; Ciborowski, 1992). Still other studies have answered the call to these shortcomings and have made recommendations to improve textbook programs (Beck & McKeown, 1991b; Stetson & Williams, 1992; Wood & Muth, 1992).

The limitations of textbooks directly impact vocabulary acquisition of content specific terms. For example, to cover extensive topics in social studies, publishers present cursory explanations that disregard rich contexts needed to help students understand the ideas represented by content specific terms. These general passages can be difficult to understand, especially if students have inadequate background knowledge to make needed inferences. In response to the call for more considerate texts (Konopak, 1988), publishers have tried to alleviate vocabulary obstacles by defining new terms in a succeeding sentence right after the word is used. Such practices still do not provide enough context and connections for students to gain a deeper understanding of the concept being presented.

In regard to effective vocabulary instruction, teachers need to focus on the enhancement of comprehension instead of promotion of word knowledge alone. Studies document the important role that direct instruction on constructing word meanings serves in the vocabulary acquisition of school age children (Graves, 1987; Stahl & Fairbanks, 1986). Preferred practices for enhancing comprehension include active, in-depth processing of word meanings where students use the meanings of words instead of regurgitating definitions, multiple exposures to word meanings in different contexts, and the integration of words with other related terms (Stahl & Fairbanks, 1986).

The beliefs and practices of content area teachers for supporting vocabulary learning in such a manner are related to the importance they place in helping students develop necessary strategies for reading informational texts. A logical place to teach reading and thinking strategies is in content area classes, such as social studies, where students can learn how to be strategic learners as they acquire content knowledge (Anderson, Hiebert, Scott, & Wilkinson, 1985). Nonetheless, studies focusing on reading strategy instruction in content area textbooks have yielded disappointing results. When Armbruster and Gudbrandsen (1986) examined reading comprehension instruction in social studies programs for fourth and sixth grade, they found that direct instruction in any reading skill rarely occurred. Menke and Davey (1994) found similar results with secondary teachers. Furthermore, one extensive analysis of science and social studies textbooks published from 1985 through 1987

revealed that these textbooks offered little support for helping learners with reading in either student books or teachers' manuals (Ciborowski, 1992). While the study examined textbooks from primary to secondary levels, the researchers found this paucity was especially common in textbooks in the higher grades. In reference to vocabulary, they found that teachers disagreed with the words publishers chose to "highlight." They also found little emphasis in teaching words in relation to conceptual development.

Almost ten years later, Hedrick, Harmon, & Linerode (2000) found that social studies publishers in grades 4-8 continue to recommend traditional vocabulary instructional procedures that typically focus on a definitional level of word meaning and disregard how learners process new words. While publishers lag behind implementing current, research-based findings about instructional procedures, this should not be the case with the knowledge base of teachers, especially those who have entered the profession in recent years. Additionally, practicing teachers keep abreast of current ideas through staff development, workshops, and university courses. Given the disparity between our understanding about vocabulary development and what is still currently found in social studies textbook manuals, how social studies teachers of intermediate and middle school students grapple with these inconsistencies is not clearly understood.

The purpose of this study was to investigate teachers' self-reported beliefs and practices of vocabulary instruction with social studies textbooks in intermediate and middle school grades and to examine how these practices align with textbook publisher recommendations. Because of the lack of research in this area, it was necessary for the study to be exploratory in nature and to do more describing of the data rather than extended statistical analysis. Research questions guiding the study included the following:

- How do social studies teachers in grades 4-8 view vocabulary teaching and learning?
- What do they report as their current instructional practices in teaching vocabulary in social studies classes?

- Do teacher-reported practices reflect use of publishers' teaching manuals for teaching social studies vocabulary?
- Do the reported teacher practices reflect what is currently viewed as effective vocabulary instruction?

Methodology

We conducted a survey to explore and describe the vocabulary beliefs and practices of social studies teachers in grades 4-8 and their use of suggestions from social studies textbook manuals to support vocabulary learning. We followed the guidelines put forth by Fraenkel & Wallen (1993) for designing and conducting surveys. Given the exploratory and descriptive nature of this investigation, we designed the survey to capture a wide variety of demographic information (e.g., ethnicity of school population, economic status of students, etc.) as well as a variety of questions about textbook and vocabulary practices. We mailed our survey instrument to 74 elementary schools with intermediate grades 4 and 5 and to 21 middle schools with grades 6 through 8. We mailed 211 surveys to the lead teacher per grade level at each school and had an overall return rate of 34.6 percent. The returned surveys included 47 teachers in grades 4 and 5 out of 148 that were mailed (31.8 percent). It included 23 teachers from grades 6 through 8 out of 63 that were mailed (36.5 percent). Three teachers did not identify their grade level position. Although survey research is best served when a large return rate is realized, we analyzed the surveys available given the constraints we experienced as outside researchers collecting data from school district personnel. However, we maintain that respondents represent the larger targeted populations for the following reasons:

- we used multiple school districts
- we selected only school districts that had ethnic and socioeconomic compositions representative of the state
- we followed the formal request procedures of the school districts to conduct research
- we confirmed survey results of demographic variables with known district data

- we offered incentives to participants for completing and returning the surveys

We were obligated to accept the initial survey returns because we had no staff-line authority to compel response and we promised teachers anonymity to encourage participation and confidentiality.

As a result, the returned surveys represent teachers across ethnicity of student population, grade level, and size of school. The respondents identified their schools as having student populations of 16 percent African American, 5.6 percent Asian American, 39.2 percent Hispanic American, 0 percent Native American, and 39.2 percent Caucasian. The respondents also represented different grade levels from 4th through 8th grade with 64.4 percent teaching in grades 4 or 5 and 31.5 percent teaching in grades 6-8. In regard to school size, 75.4 percent of the respondents identified their school size as one thousand students or less and 24.7 percent as over one thousand students. When asked to identify the type of social studies that they taught, 45.2 percent identified U.S. History (grade 5, 27.4 percent and grade 8, 17.8 percent), 45.2 percent identified the State History (grade 4, 35.6 percent and grade 7, 9.6 percent) and 1.4 percent identified World Geography (grade 6). Several participants (8.2 percent) either did not identify their grade level or subject taught making inclusion of their data unusable. Even though our return rate was relatively low for survey research (34.6 percent), we felt it was widely representative enough of our initial mailing (as explained earlier) that the reporting of this data could be useful in the design of future survey research in vocabulary practices and beliefs. Therefore, we will report data in the returned surveys and analyze that data in order to explore possible directions for future studies.

We asked teachers to approximate the number of children on free or reduced lunch to determine an estimate of socio-economic status of the students. When asked to what was the percentage of children on free or reduced lunch at their schools, 41.1 percent of the respondents identified that 20 percent or less of their children were in that category. We labeled this category as being a "low" amount of children that were economically disadvantaged. In the "moderate" category of 21-50 percent of the children being economically disadvantaged, 26 percent of

the teachers chose this category to represent their school populations. Finally, 31.5 percent of the teachers chose the "high" category of over 50 percent to represent the number of their children on free or reduced lunch. In terms of years of teaching experience, 27.4 percent teachers reported having less than 7 years of teaching experience, while 72.6 percent stated they had 7 years or more of teaching experience. This larger percentage of teachers with more experience may be representative of the national phenomenon of the aging of the teaching profession as evidenced in the forecasted teacher shortage.

One part of the survey contained a segment of an instrument created by Konopak and Williams (1994) to explore teachers' beliefs about vocabulary learning. This segment required participants to select four statements out of twelve that matched their beliefs about vocabulary learning. Konopak and Williams (1994) constructed the statements to reflect three hypotheses that help to explain the relationship between vocabulary and reading comprehension (Anderson & Freebody, 1981; Mezynski, 1983):

- a knowledge hypothesis
- an instrumental hypothesis
- an access hypothesis

Grounded in our understanding of schema theory and the constructive nature of learning, the knowledge hypothesis emphasizes the importance of prior knowledge as well as the interconnectedness between related words and concepts. The instrumental hypothesis suggests that knowing meanings of words is a necessary prerequisite for comprehension and that direct instruction in word meanings should enhance comprehension. In the words of Ruddell (1994), "it appears that when we teach vocabulary, students learn vocabulary" (p. 421). The access hypothesis highlights the importance of automaticity of word knowledge that enables learners to quickly retrieve a word's meaning. This hypothesis views practice as a critical component in vocabulary learning. Konopak and Williams (1994) used a panel of three professors and research team members to establish content validity (see p. 488 in their article for details). For the remainder of our survey, we created questions for capturing information about descriptions of respondents, descriptions of

their vocabulary practices, and the extent of their use of the social studies teacher's manual. We checked for, and confirmed construct validity for this portion of the survey by enlisting the help of several social studies teachers. These teachers took an initial version of the survey and commented whether the questions were appropriate or confusing. From their comments, we adjusted the survey before sending it out to our participants. Because this was a self-report measure of attitudes and behaviors, we did not conduct a traditional measure of reliability such as split half calculations of reliability. Also, because this was an investigational study, based on the work of Konopak and Williams (1994) we did not construct a second form at this juncture. When we collected construct validity information we also asked the expert about the clarity and potential ambiguity in any of the questions. Based on the documentation on the original Konopak and Williams work and our experts' comments were assumed the form had reasonable reliability.

Results

We report our findings based upon three variables:

- the grade level of students
- the campus' economic status
- the teachers' level of teaching experience

Our reason for doing so is based upon the impact that these factors tend to have on teaching and learning (e.g., Chall, Jacobs, & Baldwin, 1990; Klingele, W.E., & Warrick, B.K, 1990; Levin, 1970). We divided the results of the survey data into two broad categories, beliefs about vocabulary learning and vocabulary instructional practices and differences. We present the findings of each category in the following sections.

Beliefs About Vocabulary Learning

Using Konopak and Williams' (1994) instrument for capturing teachers' beliefs and practices about vocabulary teaching and learning, we investigated twelve belief statements that represented three orientations toward vocabulary learning. We instructed teachers to select

four statements out of twelve that best represented their beliefs about vocabulary learning. After generating frequencies to determine which statements teachers considered as most representative of their beliefs, we then ranked each belief and the proportion of teachers who identified it as being in their "top four." Table 1 presents the twelve belief statements in this rank order.

Table 1

Teacher Beliefs about Vocabulary Learning

| Rank | Percent | Belief | Hypothesis represented |
|------|---------|--|------------------------|
| 1 | 78.1 | A new word is acquired through learning about a topic and information about that topic. | Knowledge |
| 2 | 76.7 | Children learn new words through their experiences, such as participating in an activity. | Knowledge |
| 2 | 76.7 | Having knowledge about a subject helps children learn new, related words. | Knowledge |
| 4 | 72.6 | Learning a new word means developing a concept of ideas related to that word. | Knowledge |
| 5 | 47.9 | A new word is acquired through many encounters with its definition. | Access |
| 6 | 21.9 | Learning a new word means acquiring a definition, or facts about the word. | Instrumental |
| 7 | 5.5 | Learning a new word means repeating it so that the meaning becomes automatic. | Access |
| 7 | 5.5 | Being given a list of words and definitions helps children learn new words. | Instrumental |
| 9 | 4.1 | Learning new vocabulary takes place one word at a time. | Instrumental |
| 10 | 1.4 | Children learn new words best through practicing the definition over and over. | Access |
| 10 | 1.4 | Children learn new words best through direct presentation of their definitions, such as telling them the meaning of words. | Instrumental |
| 12 | 0.0 | Being quick and efficient will help children learn new vocabulary | Access |

For each belief, we conducted three comparisons to determine:

- the grade level of the students
- a campus' economic status
- the teachers' level of teaching experience was related to any variation in the perceived importance of the belief

We determined that three beliefs were differentially affected by grade level, economic status, or teacher experience. The nine beliefs not impacted by economic status, teacher experience, or grade level were:

- Children learn new words through their experiences, such as participating in an activity.
- Learning a new word means acquiring a definition, or facts about the word.
- Learning new vocabulary takes place one word at a time.
- Children learn new words best through practicing the definition over and over.
- Being quick and efficient will help children learn new vocabulary.
- A new word is acquired through learning about a topic and information about that topic.
- Learning a new word means repeating it so that the meaning becomes automatic.
- Being given a list of words and definitions helps children learn new words.
- Children learn new words best through direct presentation of their definitions, such as telling them the meaning of words.

Using the chi-square test, we noted significant interactions between the three comparisons (grade level, economic status, or teacher experience) and the following reported beliefs:

- Having knowledge about a subject helps children learn new, related words.

- A new word is acquired with many encounters with its definition.
- Learning a new word means developing a concept of ideas related to that word.

There were significant differences across grade levels for two belief statements:

"Having knowledge about a subject helps children learn new and related words" and "Learning a new word means developing a concept of ideas related to that word." With both beliefs, intermediate teachers had a significantly higher proportion of responses for the beliefs in the 'Top 4' than the middle school teachers. There was also a significant difference in socioeconomic status for belief statement, "A new word is acquired through many encounters with its definition," with teachers in less economically disadvantaged sites selecting it more frequently. Table 2 illustrates this information.

Table 2

Chi-Square Test of Interactions about Teacher Beliefs

| Differences related to: | | |
|---|--|---|
| | Economic Disadvantage | Teacher's Experience Students' Grade Level |
| Having knowledge about a subject helps children learn new, related words. | | Significant $\chi^2=6.86$; df=1 p = 0.01 |
| A new word is acquired through many encounters with its definition. | Significant $\chi^2=10.10$; df=2 p = 0.01 | |
| Learning a new word means developing a concept of ideas related to that word. | | Significant $\chi^2=6.22$; df=1 p = 0.01 |

Vocabulary Instructional Practices and Differences

We investigated eighteen practices and conducted three comparisons to determine:

- the grade level of the students
- a campus' economic status
- if the teachers' level of teaching experience was related to any variation in the practice

We selected the eighteen practices described below because they represent typical tasks related to both traditional vocabulary instructional practices and to practices based upon current understanding of vocabulary acquisition (Allen, 1999; Blachowicz & Fisher, 1996). In this section, we present those practices not impacted by these variables and those practices significantly impacted by the variables.

Practices not impacted by grade level of students, economic status, or teachers' experience

Fifteen practices (the questions to which the teachers responded) were not impacted by grade level, economic status, or teacher experience. They include the following:

- How do you rate the textbook you are using? Across all teachers surveyed, 83.5 percent rated their social studies textbooks overall as being between adequate and very good.
- How well does the textbook you are using clarify new terms? Almost 85 percent thought their textbooks were adequate to very good at clarifying new terms.
- How long does it take to cover one unit in your classes? The majority of teachers (60.3 percent) reported taking 6-9 weeks to cover a unit.
- How long does it take to cover one chapter in your classes? The majority of teachers (75.4 percent) reported taking 2 or more weeks to cover a chapter.
- How often do you give students lists of words and definitions to help them understand the text? Twenty-two

percent gave students lists of words and definitions to help them understand the text with each unit and almost 25 percent gave this assignment at every chapter. Thirty-seven percent of the teachers reported that they seldom gave this assignment.

- How much time do your students spend looking up definitions for new terms before reading the textbook where new words are found? Thirteen percent of the teachers stated that their students spend thirty minutes to an hour looking up definitions for new terms before reading the textbook containing the new words and almost 40 percent reported their students spent less than thirty minutes doing this activity. Barely 30 percent said this activity was not part of their instruction.
- How often do your students use the dictionary or the textbook glossary to look up new social studies terms? Eleven percent of the teachers reported having their students do this for every unit, 28.8 percent reported it for every chapter, 17.8 percent for every lesson, and 34.2 percent stated that they seldom had their students do this activity.
- At the beginning of a new unit in social studies, how much time do your students have in class discussions to talk about what they already know about targeted vocabulary words? At the beginning of a new unit 37 percent of the teachers allow 20-30 minutes of discussion to talk about what the students already know about targeted vocabulary, while 34.2 percent spend 10 minutes in this activity, 15.1 percent spend 5 minutes or less and 11 percent report that it is not part of their instruction.
- How many different opportunities do your students have to practice using a new word introduced in a unit? (i.e., fill in the blank, reading definitions, using new words in answers and essays, tests, etc.) Over 46 percent of the teachers gave their student 3-5 exposures to practice using the new words while almost 40 percent gave the student 6-9 exposures.
- How often do your students write sentences with new vocabulary words? Four percent of the teachers had their students use the words in a sentence for each unit, 13.7

percent did this for each chapter, 11 percent for each lesson, and 68.4 percent reported this was done seldom or was not part of their instruction.

- How often do your students use new vocabulary words in other kinds of writings, such as essays, reports, journal responses, etc.? Eleven percent of the teachers do these kinds of writings on each unit, 35.6 percent on each chapter, 13.7 percent on each lesson, 31.5 percent checked seldom, and 5.5 percent checked other.
- How do you select vocabulary words to teach for each unit, chapter, or lesson? The majority of teachers (57.5 percent) checked that they follow the terms highlighted by the authors of the textbook, 21.9 percent indicated that they create their own list of words, 1.4 percent of the teachers have their students select the words, and 13.7 percent checked "other".
- How often do you use flash cards (or other ways) to help students review newly acquired word meanings? Concerning using flash cards or other ways to review the newly acquired word meanings, 6.8 percent of the teachers did this at the end of every unit, 26 percent at the end of every chapter, 15.1 percent at the end of every lesson, and 49.3 percent reported that their students reviewed words on their own without it being part of the teachers formal instruction.
- What kinds of vocabulary tests do you give most frequently? The kinds of vocabulary tests teachers gave most frequently involved having students match words with definitions (8.2 percent), write the definitions (8.2 percent), answer multiple-choice questions (5.5 percent), and write explanations (42.5percent).
- What kind of reading format do you use most frequently? For this question, the teachers reported having the students read the textbook independently in class (12.3 percent), read it at home (8.2 percent), listen while the teacher reads (8.2 percent), and other ways (23.3 percent). Under the category of "other ways," teachers listed examples such as a combination of the ways listed above, students reading to

each other in pairs, and students listening to the text read aloud on audiotape.

Practices impacted by grade level of students, economic status, or teachers' experience

In three of the practices, we found that practice was differentially affected by grade level, economic status, or teacher experience. Using the chi-square test, we noted significant interactions between the three variables (grade level economic status, or teacher experience) and ratings of teacher's editions, reliance on teacher's editions, and vocabulary instructional techniques. We included ratings of teacher's editions in this section because use of instructional materials can be viewed as part of instruction.

- How would you rate the teachers' edition? Overall, teachers from schools with populations with low numbers of students that were economically disadvantaged rated their teachers' edition as less helpful than the ratings of teachers from schools with populations of higher incidences of economically disadvantaged students. Teachers with less experience (1-6 years) reported the teachers' edition to be much more 'Somewhat Helpful' and much less 'Helpful' than the teachers with more experience. Furthermore, teachers at different grades had significantly different responses to how they rated their social studies textbook. As a group, intermediate grade teachers rated their teachers' editions as being very helpful 30.4 percent of the time whereas teachers in grades 6, 7, and 8 rated their textbooks as very helpful 4.5 percent of the time.
- How much do you rely on the teachers' edition as an instructional guide? This question produced a significant difference by grade level. In general, intermediate teachers tended to follow the instructional guidelines offered in the teachers' editions much more than the middle school teachers.
- Which instructional strategy do you find most helpful? Responses to this question also produced significant differences between intermediate and middle school teachers' responses. Twenty-two

percent of the intermediate grade teachers reported that providing definitions and sentences for conceptually loaded words was a helpful instructional strategy for teaching vocabulary. On the other hand, proportionally over twice as many, 47.6 percent of the middle school teachers indicated that providing definitions and sentences for conceptually loaded words was a helpful instructional strategy for teaching vocabulary. Fifty-eight and one-half percent of the intermediate grade teachers selected visually representing concepts as a helpful instructional strategy for teaching vocabulary. In contrast, proportionally only half as many, 23.8 percent of the middle grade teachers selected this strategy as being helpful. Finally, only 12.2 percent of intermediate teachers used dictionaries and glossaries while 23.8 percent of middle school teachers selected this strategy as being helpful for teaching vocabulary.

Table 3

Chi-Square Test of Interactions of Teacher Practices

| Differences related to: | | | |
|---|--|---|--|
| | Economic Disadvantage | Teacher's Experience | Students' Grade Level |
| How much do you rely on the teacher's edition as an instructional guide? | | | Significant $\chi^2=11.21$; df=4 p = 0.01 |
| How would you rate the teacher's edition? | Significant $\chi^2=16.14$; df=4 p = 0.04 | Significant $\chi^2=13.19$; df=4 p = 0.01 | Significant $\chi^2=9.28$; df=4 p = 0.05 |
| Which instructional strategy do you find most helpful? | | | Significant $\chi^2=7.87$; df=4 p = 0.05 |

Discussion

This study followed a previous investigation of vocabulary instruction support in the teachers' editions of social studies textbooks (Hedrick, Harmon, Linerode, 2000) in order to understand how social studies teachers (grades 4-8) supported vocabulary learning, especially in conjunction with use of social studies textbooks. Prior to this current study, we wondered if we would find teachers doing more effective vocabulary instruction or doing activities more reflective of the teacher's manuals with their outdated notions of how vocabulary development occurs. We also wondered if social studies teachers' practices, effective or not, would reflect their reported beliefs about how vocabulary is developed. Therefore, we conducted this exploratory, descriptive study to examine teachers' beliefs about vocabulary learning as well as instructional practices and views about their social studies textbooks. As with all survey data, we acknowledge that our findings are based on self-reporting by the participants and that Konopak and Williams' statements (1994) are based on a broad description of the relationship between vocabulary and reading comprehension. Nevertheless, findings revealed both expected and surprising results about social studies teachers' espoused beliefs and vocabulary practices.

Across grade levels (intermediate and middle school teachers), social studies teachers' beliefs about vocabulary learning paralleled the findings of Konopak and Williams (1994) in their investigation of elementary reading teachers. Over 70 percent of the teachers in this survey selected statements that reflected the knowledge hypothesis. Such reported beliefs are encouraging because it suggests that teachers understand the relationship between vocabulary learning and conceptual understanding. However, a less encouraging finding was the number of teachers who felt that new words could be learned by repeated encounters with the definition. Approximately 50 percent of the respondents selected this belief statement that Konopak and Williams classified as indicative of the access hypothesis. Multiple exposures to words are necessary for word learning to occur, but these exposures should include a variety of different contexts that move beyond definitions to actual word use (Stahl & Fairbanks, 1986). Another finding was that over 20 percent of teachers felt that learning a new word meant

acquiring its definition or facts about the word, representative of the instrumental hypothesis. While definitions are effective as an initial step in word learning, they convey only a superficial level of knowledge about a word and do not, by themselves, help students learn how to use a word (Nagy, 1988).

When we examined the data in terms of teacher experience, we found no differences in their rankings of the beliefs. As a contrast, in the Konopak and Williams' study (1994), the participants, who indicated a general tendency toward the knowledge hypothesis, had 10 years or less experience in teaching. The investigators hypothesized that these teachers had recently attended teacher preparation programs and had a principal who advocated staff training in teaching and learning. In our study, however, teaching experience was not related to the rankings of teacher-reported beliefs about vocabulary learning.

Another finding tied to beliefs was that more intermediate grade teachers leaned toward a knowledge hypothesis about vocabulary learning than middle school teachers. Interestingly, Konopak and Williams (1994) found those teachers in grades 3-5 gravitated more toward the instrumental hypothesis or a combination of all three orientations as compared with the primary grade teachers who had a propensity for the knowledge hypothesis. It appears that, as we move up in grade levels, teachers may be inclined to support the instrumental hypothesis because it represents direct instruction of vocabulary that entails a measure of teacher control (Konopak & Williams, 1994). On the other hand, many social studies teachers in middle schools are certified at the secondary level and may not have had the depth and breadth of preparation in reading that many teachers with elementary certification receive in their teacher preparation programs.

An unexpected finding involving beliefs was that more teachers in less economically disadvantaged sites selected the statement, "A new word is acquired through many encounters with its definition," than compared to teachers in economically disadvantaged sites. We surmise that this may true in many instances because teachers in more affluent school settings may find that more traditional vocabulary practices seem to work for the majority of the students [who may have much stronger

vocabularies and more extensive experiences acquired outside of formal schooling]. In less affluent school settings, teachers are apt to have more students who do not benefit from traditional methodologies and who require stronger support for developing effective vocabularies due to limited support or equipping prior to in-school exposure to the word.

Teachers across all categories rated their social studies textbook overall as adequate or better and specifically thought the textbooks were adequate or better in clarifying new terms. While publishers may supply a sentence using the definition immediately after the sentence containing the target word, definitions tell very little about a word and they do not represent concepts very effectively (Nagy, 1988). It may be that teachers, however, are attributing the supplying of a definition as clarification of the target word. In reference to our question of how teachers viewed the helpfulness of the teachers' editions to their social studies textbooks, however, we found significant differences based on school population, teaching experience, and grade level. We found higher textbook ratings from teachers in lower socioeconomic school settings, teachers with less experience, and teachers in intermediate grades. In particular, we noted a great disparity between teachers at different grade levels. As a group, intermediate grade teachers rated their teachers' editions as being very helpful 30.4 percent of the time, whereas teachers in grades 6-8 rated their textbooks as very helpful 4.5 percent of the time. These results are not surprising, given the dearth of vocabulary teaching suggestions found in middle school teachers' editions of social studies textbooks (Hedrick, Harmon, Linerode, 2000). Along similar lines, middle school teachers also reported less reliance in following instructional guidelines in teachers' editions than that reported by the intermediate teachers.

In terms of vocabulary instructional techniques, teachers as a whole had an especially troubling conflict of practice. We found that approximately 48 percent of the teachers reported seldom having their students write sentences with new vocabulary words and 31.5 percent seldom had their students using the words in any other kinds of writing such as reports and essays, yet 42.5 percent of the teachers reported that their vocabulary tests involved having students write explanations of the words. This represents a large leap from doing few, if any, generative level activities where students create novel responses using the target

words to being required to supply highly generative levels of word processing during testing. On the other hand, we found significant differences between what intermediate and middle school teachers valued as effective teaching practices. The middle school teachers displayed a tendency to rely on more traditional approaches that involved writing definitions and sentences, whereas intermediate teachers regarded other techniques, such as visually representing concepts, as helpful instructional strategies for teaching vocabulary. This information is interesting in that it indicates some inconsistencies in the reported data of intermediate grade teachers. Based on previous research (Hedrick, Harmon, Linerode, 2000), we know that the textbooks infrequently include visual representations of concepts as a vocabulary instructional strategy. If teachers were relying solely on textbook recommendations, then they would not be implementing strategies they consider to be helpful for teaching vocabulary. Yet, this same group of teachers rated their textbooks as very helpful over 30 percent of the time. It may be that they value other features in the textbook, such as designated key terms and review activities at the end of the chapter.

Implications

There still appears to be some discrepancy between what teachers report as their beliefs about vocabulary learning and their espoused instructional practices for supporting vocabulary in the teaching of social studies. Even though their reported beliefs favor current understanding of effective vocabulary instruction, their reported practices appear to value traditional notions of vocabulary instruction found in many social studies textbook manuals. The findings of this study hold several implications. First, as an exploratory study, this investigation calls for more extensive research on teacher beliefs and practices that would include classroom observations to corroborate espoused beliefs and practices. Second, the findings also call for the need of guidelines to help teachers and district personnel select social studies textbooks that include relevant vocabulary instructional suggestions. Third, these reported practices indicate a need for more emphasis on vocabulary instruction in teacher preparation programs at both the elementary and secondary level. There is a critical need to create awareness that the use of effective vocabulary instruction must be incorporated into content area

classrooms, not only to build vocabulary but to also aid in conceptual understanding. Finally, publishers of social studies textbooks need to include effective instructional suggestions to support vocabulary learning.

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Making a Cyber Literacy Connection From the Storage Room to the College Room

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What roles can colleges and universities play in serving the many young adults whom our public school systems fail? This article sheds light on how one university was able to make a literacy connection with students attending an Alternative High School (AHS). This connection enabled AHS students and teacher candidates to effectively carry out a writing project in cyberspace. Data indicated that as the AHS students worked closely with their mentors, they became more aware of literacy strategies they needed to construct meaning and were able to recognize and appreciate quality writing. Thus, creating more partner-ships between higher institutions and AHS students can assist in maintaining and sustaining young adults in school until graduation and perhaps, beyond.

THE LATEST REPORT (2000) of the National Center for Educational Statistics (NCES) indicated that five out of every 100 young adults enrolled in high school in October 1999 left school before October 2000 without successfully completing a high school program. Data also revealed that in 2000, about three-fourths (75.8 percent) of the current-year dropouts were ages 15 through 18 and that about two-fifths (42.0 percent) of the dropouts were ages 15 through 17. The data indicate that the public high school system is not meeting the needs of many young adults. Thus, in addition to alternative placements, colleges and universities can take part in serving these young adults. This article sheds light on how one university was able to form a cyber literacy connection with students attending an Alternative High School (AHS). Its major purpose is to offer insights of a writing project so that professors, teacher candidates, classroom teachers and their students can replicate it.

In Mrs. Brown's (pseudonym) alternative high school classroom, she worked with students ranging in age from 13 to 18 (and even up to 21). The average student was two years behind grade level and reading was an extremely daunting task. Not only were the students facing a reading barrier, they were also contending with a barrier within their learning environment. Mrs. Brown stated that her class was once located in the busy hallway within the school building. She explained:

We placed old partitions in the long, dark hallway to keep others from walking through our class. However, there wasn't much that we could do to avoid being disturbed by the boisterous sounds surrounding our class. It was like we could hear everything in the school that made noise. For example, we heard, voices of students, shuffle of feet and last but not least, the bowler, what a rumbling sound it made.

Subsequently, her class was moved to a room that was formerly known as the school's storage room. The move to the storage room was an attempt to create a learning environment that was conducive to traditional learning (Kagen, 1987). In this room, Mrs. Brown taught four classes per day limited to twelve students each. A large number of the students had poor writing skills. Their papers lacked introductions and conclusions and had no paragraphs. Many students wrote papers that, unfortunately, had no relation to the question asked and were then,

encouraged to rewrite them. Therefore, her role was to enhance students' skills necessary for success at school and to further encourage them to bond with the staff and fellow students. She felt interacting and bonding with college students would be even more useful to student learning. Although she had a strong interest in this, she wasn't exactly sure how to make it happen. After hearing and reading about cyber literacy projects that engaged students in meaningful learning at a university some 45 miles away, she decided to have her name placed on the university's cyber-partnership list. Weeks later, she was contacted and invited to participate in the cyber literacy project (Boxie & Maring, 2001; Boxie, 2002). She gratefully accepted the partnership because she knew that technology was quite motivating and advantageous for her students and they enjoyed using computers. Accordingly, she used this opportunity to make a literacy connection from the storage room to the college room.

The Storage Room

The storage room, also known as the Alternative High School classroom, served students who had difficulty functioning in traditional high schools. These students lived on their own, with friends, or with a series of people. Some were self-supporting while others were homeless. The students attended the program two and one half hours per day, four days per week. The classes lasted six weeks (also known as a hexter), and they took two subjects at a time. Their academic subjects included reading, math, science, social studies, and English. They were also required to complete a health and wellness class (HIV/STD) which carried a half credit. Finally, the students took the class called "Secrets of Success" or "Seminar of Success" (SoS). In part, they covered topics such as having a positive attitude, developing communication skills, dealing with emotions, solving problems, and working as a team. The teacher stated, "some students move on after one six week session, many stay for a total of twelve weeks, while a few linger or don't return."

The first few minutes of each class period typically began by having a group discussion regarding their feelings. During that time the teacher used provocative questions that were taken from Les Christie's "Have You Ever" or "What If" books. Next, the students worked independently for the thirty minutes reading silently or developing and writing stories

they would send to their cyber-buddy for feedback. The feedback took the form of suggestion, guidance, praise, etc. Before being dismissed, the students would complete a self-assessment form for the day on the 5 P's (prompt, prepared, polite, participation and positive mental attitude) and tell Mrs. Brown something they learned that day.

Once a week Mrs. Brown held a Probation Intervention Class consisting of students trying to earn their way back into the program. These were returning students who had trouble completing their work or had an excessive number of absences.

The College Room

At a land grant institution in an isolated area of the northwest, teacher candidates in a content literacy course were assigned to complete a cyber literacy project. Teams were formed on the basis of common majors. For example, teacher candidates majoring in elementary education were paired with elementary teachers, and English majors were paired with English teachers. However, the English majors decided they wanted to make a difference in the lives of disadvantage youths, so they decided to pair with Mrs. Brown, an AHS teacher.

During the first four weeks of class, the main focus was helping teacher candidates build a knowledge base of literacy strategies needed to enhance writing. They spent many hours reading and reviewing professional texts and articles. The teacher candidates also reviewed Essential Academic Learning Requirements (EALR) benchmarks and viewed archived course web sites that gave the teacher candidates insight into what was required as well as a sense of what others had accomplished in previous semesters. During the next few weeks of ongoing communication and collaboration between the teacher candidates and the classroom teacher, ideas were exchanged, suggestions were given, and support was provided as the cyber literacy project unfolded. Researchers suggest that collaboration, shared purpose and commitment form the basis for a successful partnership (Mullen & Lick, 1999; Osguthorpe, Harris, Harris, & Black, 1995; Shive, 1984; Wangemann, Ingram, & Muse, 1989).

Writing Miss Daisy Project

The "Writing Miss Daisy" project was designed to support students' writing in an Alternative High School (Atwell, 1988; Graves, 1983). The title of this project was influenced by the name of the teacher candidate's favorite movie, *Driving Miss Daisy*. As teacher candidates planned this project, they considered the learning styles of the high school students and the desired skills needed for enhancing their learning. The goal for the activities and assignments were to encourage and challenge students to achieve in writing. As Romano (1987) explains:

Amid the madness of the demands for competence-based test of composing ability, minimum standards, ludicrous quantitative measures of writing skill, we English teachers too easily lose sight of our primary goal. We must encourage, beckon, urge, even incite every one of our students to write---not occasionally and not in proper paragraphs or five-paragraph essays, but often, and in their individual voices, each cut loose, each growing, changing, and maturing by the very act of writing (p.14).

Students from the alternative high school were involved in writing a personal narrative based on an experience of their choice. They received their first e-mail from their cyber-buddy requesting that they begin by completing the first introductory writing activity on the "pit stop" called *Meet _____ in Cyber*. The "pit stop" was a timeline used to point out a day-by-day overview of what was expected to happen in class. One AHS student wrote:

Hi my name is Mary. I am 20 years old and going back to school for the third time. I like doing crafts and spending time with my little sisters. Most of my spare time is spent babysitting or playing games with my little sisters. How is college and is it what you thought it would be.

The response given by the college cyber-buddy stated:

Hi Mary, I am paired with you for this semester to respond to your writing. Part of the writing process is revising. I will ask

you questions about your writing and make suggestions to encourage you through this process. Don't forget to use your spell checker.

College is nothing like I thought. It is a time to meet new amazing people and learn things about myself I never knew. I wouldn't trade my time here at Northwestern State University for anything. I am very grateful for this opportunity. I am thankful for my family. I am excited to learn more about you and I hope some of this feedback helps. Mary, it is a pleasure to meet you!

Once cyber contact had been established, the AHS students took another trip to the "pit stop." The teacher candidates had constructed a student hand activity for helping the students generate information that would later be used to write a personal narrative. They outlined their hand on a sheet of paper and wrote words around the hand that described them or activities they enjoyed. For example, one hand had words written around it such as frog, California, Adidas, runner, May 22nd, etc. The students were asked to add details to their hand such as rings they were wearing, their wristwatch, or any scars/tattoos they had.

After minutes of writing words that described them, students worked with a partner and shared in details what they had written on their hand. For example, one student shared that the word "runner" meant that she was once a long distance runner. Once students had a chance to meet everyone and ask each other questions, they used the information from their hand activity to write a paragraph about them or a topic of interest. The strategy of clustering was also introduced. Some students used clustering to help them generate ideas of what to write about on their topic of interest. Clustering is a pre-write writing tool that helped students brainstorm ideas, explored the many directions that their topic took, narrowed down general ideas into more specific topic areas and discovered what they wanted to write about.

When the AHS students composed the first draft of their personal narrative, they were ready to follow the steps for engaging in the cyber writing activity with their cyber mentors. They used a preaddressed

email link to submit their work to their cyber mentors for feedback. The teacher candidates developed and used an analytical scoring guide to evaluate the students' overall performance. Analytic scales are grading guides that contain a list of qualities or features of writing, with a numerical rating for each item. The rated qualities were shared with students to provide them with the criteria to consider while writing.

One student wrote:

My interest is in old trucks, therefore, I am writing about old trucks. There are a lot of uses for old trucks, and cars. Today let us look at some of them. I found that you can soup them up and make them into high performance cars, and trucks. You can make them into low riders, jecked up. They have enough room for your big engines like your 440's, 454's, 427's, 350's, 302's, 360's. There is a lot of different types you can get, like Ford Chevrolet, Dodge, General motor company, Pontiac, Honda. There are a lot of different types of cars by these companies. You choose the company you want to deal with and ask about all the cars they put out and if they don't have the type of car you want then go to another company. Like if you went to Dodge and asked for a Camaro they would look at you as if you were joking, and if you went to ford and asked for a Chevrolet product they would look at you the same way. We all know that we need a reliable source of transportation and that is why I decided to do this.

The teacher candidate responded by saying:

GREAT start on your story! We are so impressed! We knew you could do it! The topic you chose is very interesting to us and you have included some fascinating information of how one could improve the quality of old trucks. But could you explain to us what you mean by "old trucks". How old is old? 1960? 1970? Or... Tell us other reasons why you like old trucks. Since, you mentioned both old cars and trucks in your story, perhaps you should state that in the introduction. Keep sending revisions and any other stories you have!

The teacher candidates felt that students were willing to write not only because they were writing about topics they were interested in but also because they knew we would diligently read it. The students wrote about topics such as cars, happiness, television, drugs, and sometimes violence. One teacher candidate stated that his cyber buddy was so motivated to write that her story was one of the first stories he received. He responded and asked her to add details to the events to help make it more believable. She had great chronology to her events but it lacked details. The AHS student responded the very next day with more details added to her story.

The Writing Miss Daisy project focused on reflecting on their story and deciding what elements to include. It also focused on editing and revising their narrative. This helped in developing writing, reading and critical thinking skills as they received feedback from the teacher candidates to evaluate the importance of information to be edited. Finally, the fact of publishing a story in cyber gave them a sense of accomplishment and a chance to see technology working for them and not excluding them because of their socio-economic background.

Using technology can sometime be a challenging endeavor, for example, during this project, servers went "down" or other glitches occasionally occurred (e.g., links did not work or graphics unexpectedly disappeared from the page). Other limitations involved lack of time in the content literacy course and sometime lack of effort on the part of the teacher candidate. In light of the limitations, it is clear that the classroom teacher, teacher candidates, and students need ongoing support to help them productively engage in cyber mentoring activities.

Feedback from the College Room

Teacher candidates were coached in advance so they could use various forms of electronic feedback. Twelve forms of electronic feedback (Bonk et al., 1998) were used as options/categories for giving feedback to AHS students as the interactions took place:

- social acknowledgment
- questioning

- direct instruction
- modeling/examples
- feedback/praise
- cognitive task structuring
- cognitive elaborations/explanations
- push to explore
- fostering reflection
- dialogue prompting
- scaffolding
- e-mail discussion (see Table 1).

Johnny, a teacher candidate, expressed his feelings, in general, about providing feedback to students during the writing process by saying: "I really enjoyed the authentic experience of being able to interact with a learning community through cyber. The students seemed very interested in the responses they received and really took what we said to heart. I could see the advancement of their writing skills as the project progressed."

As these categorized remarks reveal, the teacher candidates saw themselves as co-constructors of knowledge and were inspired to see that students took their advice to improve their assignments. Moreover, the teacher candidates' involvement as guides or mentors in this social collaborative environment helped enrich the students' writing.

Conclusion

Forming a cyber-partnership was an effective way of making a literacy connection from the storage room to the college room. As the AHS students worked closely with their cybermentors, they became more aware of literacy strategies (KWL, clustering, asking questions and writing process) they needed to construct meaning. The literacy strategies employed in the project helped students understand the specific actions they took in order to gain understandings and assess their learning. The literacy strategies also helped them to get their minds focused on the matter of reading and writing to learn and to engage in metacognition.

Students were also able to recognize and appreciate quality writing. As one student stated, "The strategies did improve my writing because the strategies helped me focus my writing and organize my ideas before writing. I usually have trouble concentrating on one specific topic, forming paragraphs as I write a paper, but this time, I felt so much better about it." Thus, an analytical rubric was used to assess students' written work. The students scored an overall average of 91 percent on measurements of the three writing traits (content/ideas, style, and organization).

During the process of cyber-partnership, literacy learning took place in cyber space where teacher candidates and AHS students were connected by electronic text. Throughout the ongoing communication, e-mail was used within the cyber-partnership for engaging in the writing activities. This made it possible for collaboration in a school-university project and thus, showed how cyber-partnering created an environment that encompassed both literacy and technology.

In addition, the Writing Miss Daisy project served many purposes beyond writing. Mrs. Brown stated that the classes working with college students had better attendance. They were enthusiastic about interacting through cyber space and receiving feedback from the teacher candidates. The students were taught to contextualize literacy strategies within the writing assignments as they worked to achieve success. Furthermore, several AHS students decided they wanted to become writers. One student who came to get a GED, decided to stay to get a diploma. He was so fond of his experience with college students that he wanted to move on to a technical institution after graduation and become a computer technician. Thus, creating more partnerships between colleges and AHS students can turn an obstacle and barrier into opportunities for successful literacy experiences.

Table 1

Cybermentoring Feedback

| Feedback Categories | Examples |
|---|---|
| Social Acknowledgement | "Hi Bill, I liked your story. You have a lot of great ideas running throughout it." |
| Questioning | "Could you explain to us what you mean by "old trucks? How old is old? 1960? 1970? Or... Tell us other reasons why you like old trucks." |
| Direct Instruction | "Bill, remember back when you visited the "pit stop" and you used the clustering strategy to help you generate ideas for your topic? How might you use those ideas to add details to your story?" |
| Modeling/examples | "When gathering thoughts for a story, try asking yourself Who? What? When? Where? Why? And How? For example, When is a truck considered as an old truck?" |
| Feedback/Praise | "GREAT start on your story! We are so impressed! We knew you could do it!" |
| Cognitive Task Structuring | "As you begin to edit your paper, keep in mind the feedback you were given during the revision stage." |
| Cognitive Elaborations/Explanations | "What we can work on is separating out each event in the story and explain it just a little bit more. As a reader, I became confused when Cory was where and when." |
| Push to Explore | "Making cars into low riders sound interesting. You should try writing or contacting a car/truck company to find out how this is done." |
| Fostering Reflection | "New ideas should not be found in the conclusion. Rethink your main idea. Your conclusion might summarize your main points, pose a question, or propose a course of action." |
| Dialogue Prompting | "Lets work on separating out each scene. Just list it from your cereal story. Decide when and why your character goes to each scene. From this list we will work on adding detail to each scene." |
| Scaffolding/Suggestion | "Since, you mentioned both old cars and trucks in your story, perhaps you should state that in the introduction. Keep sending revisions and any other stories you have!" |
| Management (via private e-mail or discussion) | "Hello colleagues, I have immediately e-mailed my response to my cyber buddy. Remember, we should all be doing this with all our responses. Have a great weekend!" |

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Examining and Predicting College Students' Reading Intentions and Behaviors: An Application of the Theory of Reasoned Action

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This study examined the recreational reading attitudes, intentions, and behaviors of college students. The theory of reasoned action provided the framework for the investigation and prediction of the students' intentions and behaviors. Two hundred and one students completed questionnaires developed according to the guidelines for the construction of standard theory of reasoned action questionnaires. The instrument assessed students' attitudes, outcome beliefs, subjective norms, and normative beliefs, as well as intentions and behaviors regarding recreational reading. The constructs of the theory explained 35-38 percent of the variance in students' intentions. Attitudes toward recreational reading provided the strongest and most significant contributions.

INDIVIDUALS READ FOR many reasons: information acquisition, knowledge, self-reflection, practical application, as well as pleasure, enjoyment, and relaxation. The importance of reading contributes to many dimensions in the development of an educated individual. Because reading is fundamental to learning in our schools, it can be assumed that college and university students are skilled readers, and that they enjoy reading. Goodwin (1996), however, claims that aliteracy is an epidemic among college students. Aliteracy refers to the "lack of the reading habit in capable readers" (Harris & Hodges, 1995, p.6). Some researchers and educators (Goodwin, 1996; Sheory & Mokhtari, 1994) claim that students spend minimal time reading required readings, and even less time reading that which is not required.

Goodwin's (1996) interviews with college students indicated that the majority did not read for leisure and rarely read their textbooks. Sardo-Brown and Beeghly (1996) surveyed 238 college students and found that 65 percent of them could not name a book that they had recently read, and 62 percent responded 'no' when asked if there existed a book so important that they could not imagine not having read it.

Gallik (1999) examined the recreational reading habits of 151 college students and found that 63 percent of the students she studied spent two hours or less each week reading for recreation while classes were in session, and 48 percent of them reported spending two hours or less each week reading for recreation during vacation periods. Ducheini and Mealy's 1993 study of 90 college freshmen found that 66 percent of the students reported not enjoying reading and avoiding it when possible.

Attitudes about reading are closely linked with reading behaviors (Greaney & Hegarty, 1987; Smith, 1990). Studies of college students' reading attitudes, however, have yielded inconsistent results. Brooks (1996) found that the college students participating in her study had positive attitudes toward reading, yet Burak (2003) and McCoy (1991) found the majority of participants in their studies had negative or neutral attitudes toward reading.

Reading is a foundation for success, not only in school, but also in life in general (Anderson, Hiebert, Scott, & Wilkinson, 1985). And

recreational reading has been found to improve literacy skills, academic performance, and course grades (Dretzke & Keniston, 1989; Gallik, 1999; Krashen, 1993). The recreational reading of college students thus warrants further exploration.

Examining students' recreational reading using an established theoretical framework could yield important information about the motivational structure of this fundamental activity. The theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) uses a single framework to predict and understand virtually all human behavior. The theory posits that behavior is directly determined by intention; a person's decision to do something is most accurately predicted by his or her intention to do it. Because it seeks to understand as well as predict behavior, the theory of reasoned action identifies the determinants of intention, as well as the antecedents of those determinants. According to the theory, a person's intentions to engage in a behavior are a function of his or her attitudes toward that behavior, as well as his or her subjective norms regarding that behavior. Attitude toward a behavior is a person's judgment that performing that behavior is good or bad and that he or she is in favor or against performing the behavior. Subjective norms refer to an individual's perceptions that persons who are important to him or her believe that he or she should engage in the behavior. The perceptions are subjective because they reflect what a person believes other people think, not necessarily what they do think.

According to the theory of reasoned action, attitudes toward a behavior are determined by salient beliefs about the outcomes of the behavior, and subjective norms are determined by normative beliefs; that is, the perceived beliefs of specific individuals about performing the behavior.

The theory of reasoned action has underpinned numerous studies addressing a wide variety of behaviors including marijuana use (Morrison, Golder, Keller, & Gillmore, 2002), automation technology use (Jones, Sundaram, & Chin, 2002), tooth brushing (Syrjala, Niskanen, & Knuuttila, 2002), seeking help for alcohol abuse (Codd, & Cohen, 2003), science learning activities (Butler, 1999), and environmental

policy implementation (Bright, Manfredi, Fishbein, & Bath, 1993). Meta analyses of research using the theory of reasoned action indicate that the model explains between 40 percent and 50 percent of the variance in intentions, and between 19 percent and 38 percent of the variance in behaviors (Sutton, 1998).

The purpose of the current study was to examine college students' recreational reading within the framework of the theory of reasoned action, and to assess the applicability of the theory in predicting students' intentions to read for pleasure and leisure.

Methods

Participants and Procedures

Participants in this study consisted of a convenience sample of students enrolled in nine upper and lower division classes at a public institution. Professors teaching the nine classes distributed self-administered questionnaires. The professors informed students that their participation was voluntary, and that if they did not wish to participate, the students could return blank surveys. They also informed students that the surveys were anonymous and that they should return them in the envelopes provided.

Instrumentation

I constructed the survey instrument according to the guidelines proposed by Ajzen and Fishbein (1980, pp 260-263) for the construction of a standard theory of reasoned action questionnaire. Thirty-seven items assessed the constructs of the theory of reasoned action:

- students' attitudes
- subjective norms
- beliefs
- intentions and behaviors regarding reading for pleasure and leisure

In addition, five items addressed:

- age
- gender
- ethnicity
- class
- GPA

The major focus of this study was intention to read for leisure and pleasure. Students' intentions to read for pleasure and leisure during the academic semester, during spring break, and during the summer break were assessed with six, five-point Likert-type items (e.g. How likely is it that you will read for pleasure or leisure during the current semester? Responses ranged from (1) very unlikely to (5) very likely. Scores were summed to form the intention scores.

Attitudes toward reading for pleasure and leisure were measured with items assessed with semantic differential-type scales. These items assessed whether the students felt that reading for leisure and pleasure was:

- relaxing/stressful
- very important/ very unimportant
- very beneficial/very worthless
- a lot of fun/ very boring
- very essential/very non-essential

The attitude score consisted of the sum of the five items. I measured subjective norm by asking students their level of agreement that the people important to them wanted the students to read for pleasure and leisure.

The theory of reasoned action posits that the antecedents of attitudes and subjective norms are beliefs and the evaluation of those beliefs. The guidelines for instrument construction suggest conducting interviews with representatives of the population in order to elicit their salient outcome and normative beliefs. Thirty students, representative of, but not included among, the study participants, were therefore asked to list the positive as well as negative outcomes of reading for pleasure and

leisure. They were also asked about the relevant individuals who might approve or disapprove of the students' leisure or pleasure reading. The lists were content analyzed, similar items combined, and the resulting information used to formulate the belief-based items.

The students identified eight possible outcomes of reading for pleasure and leisure:

- improved vocabulary
- increased knowledge
- engaged imagination
- improved communication skills
- being kept from doing more important things
- wasting time
- being worn out
- stress relief

I constructed eight survey items that assessed the students' levels of agreement that reading for pleasure and leisure resulted in the stated outcomes. I also constructed items to assess the relative importance of each of the outcomes. The sum of the products of the outcome beliefs and their evaluations make up the belief-based attitude score. Point order was reversed for negative items.

The students identified three referents that might influence their reading for pleasure and leisure: their families, teachers, and friends. For each of the three referents, I constructed items asking respondents to indicate the likelihood that the referents believed that the students should read for pleasure and leisure; items were also constructed that rated the importance of doing what the referent thinks should be done. The belief-based subjective norm score was derived by summing the products of the beliefs and motivations to comply.

The instrument included two behavior based questions: one asked the students how many books they had read for pleasure and leisure during the previous semester, and the other asked how many books the students would read during the summer vacation.

I field tested the instrument with a group of students representative of the study population for clarity and readability. A panel of educators reviewed the questionnaire for face and content validity. In addition, the validity of the attitude portion of the instrument was assessed by comparing 100 students' scores with their scores on Smith's (1990) Adult Survey of Reading Attitudes, a previously validated instrument (Smith, 1990). The scores of the two tests correlated strongly, ($r = .93$), indicating strong concurrent validity. Coefficient alpha calculations were conducted to assess the reliability of the major measures of the theory of reasoned action. The analyses yielded alpha coefficients of .90 - .94 for the intention measures, .85 for attitude, and .70 for subjective norms.

Results

Characteristics of the Participants

Two hundred and one students attending a mid sized public institution participated in the study. Because the surveys were distributed and completed during class time, the response rate was nearly 100 percent. Forty-eight of the students (24.1 percent) were freshmen, 20 (10.1 percent) were sophomores, 44 (22.1 percent) were juniors, 60 (30.2 percent) were seniors, and 29 (13.3 percent) were fifth year seniors or post baccalaureate students. The students represented 23 different academic majors. One hundred forty four of the students were female (72 percent), and 57 were male (28 percent). More than 89 percent of the students were white-non-Hispanic.

Intentions, Attitudes, and Subjective Norms

As indicated in Table 1, students' scores for intentions, attitudes, and subjective norms were above the midpoints of their potential ranges, indicating slightly positive perceptions regarding reading for pleasure and leisure. Nearly half of the students (47.4 percent) responded that it was somewhat likely or very likely that they would read for pleasure and leisure during the current semester, more than half (50.3 percent) indicated that it was somewhat likely or very likely that they would read for pleasure or leisure over the spring break, and 66.2 percent reported

that it was somewhat likely or very likely that they would read for pleasure or leisure over the summer.

In terms of actual reading, 63 percent of the students had read at least one book for pleasure or leisure during the previous semester; the average number of books read by the study participants was 1.54. Of the more than 85 percent ($n = 173$) of the students who reported that they would read for pleasure and leisure over the summer, more than half (51.2 percent) indicated that they would read one or two books.

Table 1

Mean Scores for Theory of Reasoned Action Variables

| Variable | Mean Score | Standard Deviation | Possible Range |
|--------------------------|------------|--------------------|----------------|
| Direct Attitude | 19.93 | 3.51 | 5 – 25 |
| Subjective Norm | 3.68 | 0.88 | 1 – 5 |
| Indirect Attitude | 145.45 | 23.09 | 8 – 200 |
| Normative Beliefs | 45.47 | 13.21 | 3 – 75 |
| Intention (Semester) | 9.90 | 3.33 | 3 – 15 |
| Intention (Spring Break) | 9.50 | 3.95 | 3 – 15 |
| Intention (Summer) | 3.75 | 1.15 | 1 – 5 |

Most of the students had positive attitudes toward reading for pleasure and leisure, with 32.3 percent responding that it was very important, 50.2 percent responding that reading for pleasure and leisure was very beneficial, and 25.9 percent indicating that it was very essential. Sixteen percent of the students reported that reading for pleasure and leisure was a lot of fun, and 29.5 percent indicated that it was very relaxing.

The majority of the students (58.2 percent) either agreed or strongly agreed that the people who are most important to them believe that the students should read for pleasure and leisure.

Belief based measures

The theory of reasoned action posits that the antecedents of attitudes and subjective norms are beliefs and evaluations of those beliefs. The participants in this study identified eight outcome beliefs related to reading for pleasure and leisure. The majority of students believed that reading for pleasure and leisure results in positive outcomes.

More than 92 percent of the respondents agreed or strongly agreed that reading for pleasure and leisure improves vocabulary, 93.3 percent agreed or strongly agreed that it increases knowledge, 90.5 percent agreed or strongly agreed that reading engages the imagination, and 75.1 percent agreed or strongly agreed that reading improves communication skills. Nearly 17 percent of the study participants agreed or strongly agreed that reading for pleasure or leisure kept them from doing more important things, 5 percent agreed or strongly agreed that reading was a waste of time, 9 percent agreed or strongly agreed that reading for pleasure wears them out, and 70.6 percent agreed or strongly agreed that reading helps to relieve stress.

The antecedents of subjective norms are normative beliefs. These are the beliefs that specific referents would want the study participants to engage in the behavior in question. More than 57 percent of the students agreed or strongly agreed that their families think that the students should read for pleasure and leisure; 79.6 percent agreed or strongly agreed that their teachers wanted them to read for pleasure and leisure, and 25.9 percent agreed or strongly agreed that their friends thought they should read for pleasure and leisure.

Predictions of intentions

The theory of reasoned action postulates that intention to perform a behavior can be predicted by people's attitudes and their subjective norms. To test this theory, multiple regression analysis was used; intention to read was regressed on attitudes and subjective norms. For intention to read during the current semester, the analysis yielded a multiple R of .588, thus explaining 33.9 percent of the variance in the students' intentions to read for pleasure and leisure during the semester.

For intention to read over spring break, the analysis resulted in a multiple R of .617 and explained 38.1 percent of the variance in students' intentions. The analysis of intention to read for pleasure and leisure over the summer yielded a multiple R of .597, and thus explained 35 percent of the variance in intentions to read over the summer. Table 2 shows the regression coefficient tables.

Table 2

Regression Coefficient Tables for Multiple Regression Analysis with Intentions to Read Regressed on Theory of Reasoned Action Variables

| Variable | Coefficient | Std. Err. | Std. Coeff. | T-value | Prob. |
|----------|-------------|-----------|-------------|---------|-------|
|----------|-------------|-----------|-------------|---------|-------|

A. Intention to Read During Current Semester

| | | | | | |
|-----------------|--------|------|------|-------|-------|
| Intercept | -1.146 | | | | |
| Attitude | .551 | .059 | .583 | 9.288 | .0001 |
| Subjective Norm | .049 | .234 | .013 | .209 | .835 |

B. Intention to Read During Spring Break

| | | | | | |
|-----------------|--------|------|------|-------|-------|
| Intercept | -4.573 | | | | |
| Attitude | .676 | .069 | .601 | 9.844 | .0001 |
| Subjective Norm | .175 | .271 | .039 | .646 | .519 |

C. Intention to Read During Summer Vacation

| | | | | | |
|-----------------|-------|------|-------|-------|-------|
| Intercept | -.011 | | | | |
| Attitude | .199 | .020 | .612 | 9.847 | .0001 |
| Subjective Norm | -.053 | .080 | -.041 | -.659 | .511 |

In each of the analyses, attitudes contributed the largest standardized regression coefficients in the prediction of intentions (current semester $\beta = .583$, spring break $\beta = .601$, summer $\beta = .612$) thus indicating the importance of attitude in predicting students' intentions to

read for pleasure and leisure. Pearson correlation coefficients were calculated between the direct measures of attitude and subjective norms and their belief based measures. Significant correlations were found between the direct measures and their belief based measures (attitude – belief based attitude, $r = .61$, $p < .001$ subjective norm – belief based subjective norm, $r = .50$, $p < .001$).

Males' and females' intentions, attitudes, and subjective norms regarding reading for pleasure and leisure were compared. Females were significantly more likely to intend to read during the spring break ($p < .05$) and over the summer ($p < .01$) No significant differences in intentions to read during the current semester were noted. The female students had significantly more positive attitudes toward pleasure and leisure reading ($p < .001$) and subjective norms ($p < .001$) than the males.

Because attitudes toward reading for pleasure and leisure made the strongest contribution to intentions to read, a regression analysis was conducted regressing the direct measure of attitude on the eight outcomes identified by the students. A multiple R of .757 indicated that 57.3 percent of the variance in students' attitudes could be explained by the outcome beliefs. The beliefs with the largest significant beta weights were stress relief ($\beta = .392$, $p < .01$), wasting time ($\beta = .318$, $p < .01$), and engaged imagination ($\beta = .121$, $p = .05$). When intentions to read for pleasure and leisure were directly regressed on the eight outcome beliefs, the same three variables (stress relief, wasting time, and engaged imagination) were the significant contributors (all $ps < .01$).

Discussion

The purposes of this study were to examine college students' leisure reading using the constructs of the theory of reasoned action, and to determine the applicability of the theory of reasoned action in predicting college students' intentions to read for leisure or pleasure. The constructs of the theory of reasoned action were able to explain 33.9 percent of the variance in students' reading intentions for the current semester, 38.1 percent of their intentions to read over the spring break, and 35 percent of the variance in students' intentions to read over the summer. The

students' attitudes made the most substantial contributions to the predictions of the students' intentions.

The behavioral outcomes most strongly related to students' attitudes were stress relief, the belief that reading engages the imagination, and that leisure reading is wasting time. In other words, students who believed that leisure reading reduces their stress, engages their imaginations, and is not a waste of time were the students who had the most positive attitudes toward leisure reading, and who in turn had the greatest intentions to read during the semester, during the spring break, and over the summer.

The lack of significant contributions by subjective norms to the students' intentions may explain why the theory was able to predict only 35 to 38 percent of intentions versus the 40 to 50 percent of variance that is generally explained by the theory. Leisure reading may indeed be a behavior where the perceptions of what others think do not play a role in decisions to engage or not engage in the behavior.

The study's limitations include the relative homogeneity of the rather small convenience sample that prohibits generalizing to the college and university population. In addition, the reliance on self-reported information from the students may have included inaccuracies because of faulty recall or difficulties in remembering if reading that was done was required or recreational.

Despite the lack of strong support for the theory of reasoned action in predicting students' leisure reading intentions, the results of this study provide strong support for the role of attitudes in students' intentions, as well as the role of outcome beliefs in forming attitudes.

The information about students' beliefs and attitudes has implications for educators and other individuals interested in improving the literacy of the younger generations. The more students are exposed to reading that is not perceived as stressful, that does engage the imagination, and that is not considered a waste of time, the more positive attitudes and intentions the students are likely to form. Ramsay (2002) addresses the clear distinctions his senior seminar students made between

the joyful reading of their childhoods and the high-stress, assigned readings of high school and college. Teachers and professors need to develop instructional practices that integrate joyful reading into their courses. Assigning, in addition to or instead of standard course textbooks, books that are engaging, relevant, and interesting to students may be one way to help overcome the barriers that get in the way of the love of reading. Allowing for choice in reading assignments may be another way to improve reading attitudes and behaviors. If students are allowed to read what they most enjoy reading, they may develop more enthusiastic and positive attitudes toward their reading assignments.

In addition, teachers and professors can model a love for reading. They can talk about the books that they read and love; they can recommend books to students based on their personal knowledge of the students' interests and personalities.

Daniel Boorstin (1984), the former Librarian of Congress noted that what we do about reading affects citizens' opportunities for self-improvement as well as their capacity for self-government. A challenge to college faculty, therefore, is to develop interventions and course assignments that include readings that engage students without being stressful, and that foster a love of reading that will enable students to become lifelong readers and meaningful participants in their education and in society.

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