ABSTRACT

Title of Dissertation: CHALLENGING TASK IN APPROPRIATE TEXT: DESIGNING DISCOURSE COMMUNITIES TO INCREASE THE LITERACY GROWTH OF ADOLESCENT STRUGGLING READERS

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This six-month intervention study focusing on ninth-grade struggling readers had three goals: to determine the overall literacy growth of adolescent struggling readers when engaged in a task-through-text instructional framework situated within specially designed discourse communities, to determine the effectiveness of text structure instruction, and to track intrinsic motivational changes related to reading.

Small discourse communities were designed for the purpose of apprenticing students into literate high school culture. Within the discourse communities, students engaged in challenging tasks in appropriate text to increase academic literacy. Most students began the intervention reading below a second-grade level. Students who were receiving special education, second language, and no services participated in the study. Using the task-in-text discourse community framework, students in six small reading classes received daily intervention given by the researcher. This study also used low-level

expository text with four characteristics: links to interest and prior knowledge, sufficient density of ideas, clear rhetorical patterns, and clear signaling devices.

When compared with the control group, at post- testing, students receiving intervention showed a statistically significant difference in overall literacy growth as well as in their ability to use and transfer knowledge of text structure. A within-groups counterbalanced design showed that students who received text structure instruction first scored statistically significantly better on a summarization task even after they were no longer receiving text structure instruction. Students in the instruction group completed a self-reported questionnaire about motivation for reading. Statistically significant increases in reading efficacy and reading challenge were observed indicating that students increased both their personal beliefs about reading as well as their willingness to take risks as readers.

Results indicate that adolescents who are reading at very low levels can increase their literacy abilities rapidly under the right learning conditions and when given appropriate texts. Further, instruction in text structure assisted students with both comprehension and content knowledge acquisition. Finally, students in the instruction group increased their motivation for reading. Outcomes in literacy growth, text structure, and motivation, allsupport future research concerning pedagogically sound methods for providing reading intervention to adolescent struggling readers.

CHALLENGING TASK IN APPROPRIATE TEXT:

DESIGNING DISCOURSE COMMUNITIES TO

INCREASE THE LITERACY GROWTH OF

ADOLESCENT STRUGGLING READERS

By

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DEDICATIONS

My passion for this work has been high, close to my heart, and is written for:

My Goddaughter, Mariah,
Who first taught me about personal struggles with literacy
as well as how much it means to overcome them

and

My Nephew, Zach,
It is my hope you never need someone like me,
and my solemn prayer that, if you do, someone will be there.

The success of this work is dedicated to my childhood family for providing an infrastructure of personal, spiritual, and intellectual support:

My brother, Scott, for “ just getting it”
My brother, Dave, for the intellectual challenges

And, most importantly to my Parents, Rev. Shirley and Jim
My Mother,
whose strength, through the opportunity of living each day, has become my own
My Daddy,
for teaching me always to “root for the underdog”
They won this time.

This dissertation is also completed in loving memory of my grandparents. My grandmother grew up during the Great Depression, always wanting to be a teacher. My grandfather passed away during the writing of this work, but his legacy of unconditional love continues to sustain me.

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Chapter 1

Statement of the Problem

Unfortunately, very little is known about how to assist adolescent struggling readers pedagogically. What is known is that difficulties begin early and persist into the later grades if intervention is not provided (Snow, Burns & Griffin, 1998). I defined adolescent struggling readers as students who have reached middle or high school and are still reading so significantly below grade level that their inadequate literacy skills prevent them from succeeding in their regular classes. Adolescents who persist as struggling readers may need to learn the same beginning literacy competencies as younger children. Two current reports suggest the need for further empirical knowledge about adolescent literacy. In 2002, National Institute of Child Health and Human Development (NICHD) held a conference that was co-sponsored by The National Institute for Literacy, the United States Department of Education, the American Federation of Teachers, the American Speech-Language-Hearing Association, the International Reading Association and the National Education Association, out of which a research agenda in adolescent literacy emerged. Overall, the research agenda indicated significant needs in many areas. It called for a clarification of what is meant by adolescent literacy, what developmental, school and social characteristics affect learners of this age, how best to accommodate their needs, and how best to train teachers (NICHD, 2002).

The position statement of the International Reading Association (IRA) on adolescent literacy, released in 1999 (Moore, Bean, Birdyshaw, & Rycik, 1999) discussed the use of adolescent literature and appropriate instruction for students who are already readers. In her introduction of the International Reading Association's (IRA) position statement on adolescent literacy (1999), Carol Santa, former president of the IRA, specifically stated that "adolescents are being short changed," and that "No one is giving adolescent literacy very much press" (p. 97). The 1999 position statement goes on to outline six rights, which ought to be available to all adolescents in terms of their literacy growth. The first of these rights is "access to a wide variety of reading materials that they can and want to read" (p. 101). It also stated that there is a considerable lack of exemplary programs because "upper grade goals often compete with reading development" (p.101).

Regardless, mounting evidence supports the notion that a group of adolescent struggling readers does exist. Perhaps one reason evidence is so difficult to find is that as Santa (1999) reported, the entire subject of adolescent literacy receives very little attention. Information from the National Center for Educational Statistics helps to define such a group. According to the *1998 Reading Report Card*, only 33% of eighth graders and 40% of twelfth graders were reading at or above a proficient level (National Assessment for Educational progress, 1999). The National Center for Educational Statistics further reported that data for grade 12 over the three testing years, 1992, 1994, and 1998 were varied. In 1992, 20% of the nation's twelfth graders were above a proficient level. In the years 1994 and 1996, those numbers were 25% and 23% respectively, indicating that there may have been an increase in reading proficiency among twelfth graders (National Center for Education Statistics, 1998)

To put this increase in reading proficiency in perspective, I considered the dropout rate data released in *The Condition of Education Report* (1998). The report is also released by the National Center for Education Statistics, and showed that for 1991, the 10^{th} to 12^{th} grade dropout rate was 4.0%. In 1992 and 1993 that dropout rate was 4.4 and 4.5 respectively. For the years 1994, 1995, and 1996, dropout rates increased to 5.3, 5.7 and 5.0 percent. To clarify, although the data indicated that in more recent years, more students in twelfth grade were reading at a proficient level, they also indicated that dropout rates during those years were higher. These dropout rates may help to explain, in part, why fewer students in 12^{th} grade in 1994 and 1998 scored below the level of proficiency.

More recently, another significant data set relating to adolescent literacy has been released. A report issued by the Organisation for Economic Co-operation and Development (OECD), entitled Reading for Change: Performance and Engagement Across Countries, contains the 2000 results of the *Programme for International Student Assessment* (PISA) (2002). What the report made very clear, was that, in the United States as well as across all participating countries, groups of students exist who have not achieved even minimal literacy skills throughout their school careers. Reading assessments were given to 15 year old students in the 31 participating countries. PISA created five literacy levels to score the reading assessments. Even at the lowest level (Level 1) the PISA rubric assumes decoding skill as well as minimal literal comprehension, the ability to identify author's purpose, and the ability to make simple connections to background knowledge. However, in every participating country, a percentage of students existed who did not score at the PISA level 1. The average across the 31 participating countries was a PISA Level 3. At this level, students were expected to locate and integrate textual information, understand relationships, use rhetorical patterns, make inferences and critically evaluate text. Six percent of the students taking the assessment in the United States fell below a Level I PISA score, 12 percent scored at PISA Level 1, and 21 percent fell at a PISA Level 2 score, for a combined total of 39 percent of students in the United States falling below the OECD average. Among other English-speaking countries, 31 percent of Australian students scored below the OECD average, 33 percent of students in the United Kingdom scored below the OECD average, and 27 percent of Canadian students fell below the OECD average. However, all three countries had overall literacy scores that were better at a statistically significant level than 21 other participating countries (OECD, 2002).

The NICHD report (2002) and the IRA (1999) position statement suggest that much needs to be known about adolescent literacy. Data from the National Center for Educational Statistics and the OECD (2002) report indicated that a subgroup of this adolescent population had not achieved an acceptable level of literacy. Taken together, they suggested that we do not know enough about assisting this population pedagogically.

Systemic Issues and the Struggling Reader

Low-literacy adolescents are faced with a number of issues. In his 1986 work, Keith Stanovich described what is known as the Matthew Effect in reading. He proposed that good readers continue to improve precisely because they read more, while struggling readers do not improve because they do not read. Stanovich based his hypothesis on research indicating that students who read more, learn more vocabulary, and consequently, become more proficient readers. Students who read less, learn fewer words, and achieve less while their more able peers are continuing to improve their reading ability and volume of reading. This widens the reading achievement gap among good and poor readers (the rich get richer and the poor get poorer) as they progress through school (Stanovich, 1984). If a lack of empirical knowledge combined with a lack of attention to the population, lack of programming, and lack of appropriate text, (Bean, et. al, 1999) is preventing adolescent readers and struggling adolescent readers from receiving the instruction they need, then Stanovich's (1986) hypothesis is believable.

Confounding Issues

School-based and systemic variables can work together to prevent children from receiving appropriate literacy instruction in the younger grades. These variables help to propel the negative cycle of inappropriate instruction at the inappropriate time. Students may be leaving elementary school without essential literacy skills when too many such variables are working in tandem. Issues with the aptitude-achievement gap, with inappropriate “labeling”, with testing and promotion, and with access to appropriate instruction and text, represent four school-based variables that may have a negative impact on students’ literacy achievement.

It is generally not until the second or third grade year when struggling readers are first identified because most states adopt an aptitude – achievement paradigm for determining a student’s need for services (Spear-Swerling & Sternberg, 1999). With the exception of a few programs such as Reading Recovery (Center, Whedall, Freeman, Outhred, & McNaught, 1995), children who struggle often lose the entire first grade year prior to receiving intervention. Research shows that students who struggle with reading in first-grade will continue to struggle throughout their school careers (Torgesen, 1998).

Identifying children using an aptitude-achievement gap presents its own problems. Aptitude-achievement is typically assessed using an IQ measure. Singer (1977) argued against using IQ scores as a predictor of reading achievement because of testing bias and time. First, most measures of IQ are verbal in nature and therefore would put students who learn at a slower pace at a disadvantage on measures of IQ. Singer (1977) asserted that, given adequate time to learn a skill, all students who are of average intelligence are capable of mastering the task of reading regardless of IQ. It is therefore possible that struggling readers may simply not have had enough time to learn to master a reading skill prior to being forced into more difficult material.

Unfortunately, once children have shown an aptitude-achievement gap later in elementary school, they are typically labeled as Learning Disabled (LD) or Reading Disabled (RD), and often placed in resource rooms for all or part of the day, missing the reading instruction taking place in their own classrooms. Thus, children labeled as RD/LD are pulled from real classroom reading instruction to engage exclusively in part to whole phonics instruction. A larger issue with “labeling” students is the general trend to slow down the curriculum, causing lowered expectations and lowered achievement (Allington, 2000; Spear-Swerling & Sternberg, 1998).

Test scores present another issue for children. Students who are retained because of poor test scores generally make little progress the next year unless the program is changed. Rather than continuing to retain students who are reading below grade level school systems often "socially" promote children, causing them to be placed in text materials that are too difficult for them. If such is the case, it is also probable that these students will not make reading achievement gains (Allington, 2001). Furthermore, Allington (2001) indicated that, because of the heavy emphasis on standardized testing, teachers are often forced to give up contextual, meaningful reading in lieu of teaching to increase test scores. It is logical to assume that giving up curricular time to practice for tests would have negative consequences.

Because younger struggling readers may not receive appropriate literacy instruction due to late identification, inappropriate labeling and instruction, lowered expectations, and promotion issues, students who have reached adolescence and who still struggle with reading are frequently labeled "developmental dyslexics." These students may end up in remedial, clinical reading programs that focus on phonological awareness and/or word attack skills, as in a study conducted at the Hospital for Sick Children by Lovett, Borden, Lacrenza and Steinbach (2000).What should be questioned is whether this type of clinical instruction is the most effective for struggling adolescent readers.

Researchers in cognition have concluded that children's comprehension processes may well be developmental in nature (Flavell, Speer, Green, & August, 1981). With adolescent struggling readers this issue may be a moot point. For example, a fifteen year-old ninth-grader who remains a non-reader clearly possesses more background knowledge, world experience, vocabulary knowledge, and ability to engage in the use of mental strategies, than would a six year-old struggling reader.

Because high school reading material is so much more difficult than reading material in the primary grades, the challenges for high school students are magnified greatly. It seems unlikely that content area reading strategies taught in high school classrooms in the content areas would be sufficient to meet the needs of students who do not possess beginning literacy competency. For example, Brozo and Simpson (1999) suggested the use of advance organizers for students prior to reading text. If the student cannot read the advance organizer or the material it is intended to support, it is unlikely that such a technique will assist the student in comprehending text. Indeed, the IRA Position Statement indicated that there are few reading specialists at the secondary level (Moore, et. al., 1999). If this is so, then no one is considering what types of instruction or text should be used with adolescent struggling readers.

Proposed Intervention

To address the critical problem of how better to assist adolescent struggling readers, my work explored the power of combining challenging tasks in appropriate text. Because struggling adolescent readers face so many problems, my study explored the use of a specifically designed discourse community that allowed adolescent struggling readers an avenue for overcoming past failures in order to experience literacy success.

My study linked the use of challenging task in appropriate text with the use of both socially and textually assisted performance embedded in the environment of a jointly constructed discourse community (Swales, 1990). Under the right conditions, it may be possible for adolescents with very few literacy skills to accelerate their reading progress. Perhaps it may even be possible to combat some of the “Matthew Effects” in reading (Stanovich, 1986), which have caused adolescent struggling readers to experience repeated failures. While some research exists that informs practice on what may have worked for particular struggling adolescent readers, such as Babbit and Byrne’s (1999/2000) work with marginalized teenagers, to date, I have found little research that links the notions of challenging task in appropriate text at the secondary level.

Defining Discourse Communities

Swales' (1990) six criterion for defining discourse communities characterized the learning environment for my study. First, the discourse community has a set of commonly agreed upon, shared goals. In my study, the primary goal was for students to gain the academic literacy they would need to function in the high school community. Second, a discourse community has mechanisms of intercommunication all members use, and these mechanisms vary according to the purpose established by the discourse community. In my study, the primary mechanism of intercommunication was well-chosen expository text, around which discussions among members took place. Third, the members of the discourse community use the communicative mechanisms to provide information and feedback; in other words, they engage in opportunities to gain purpose-related knowledge through the specified mechanism. In my study, students engaged with appropriately chosen expository text in order to become more academically literate, the primary purpose of the creation of a smaller discourse community.

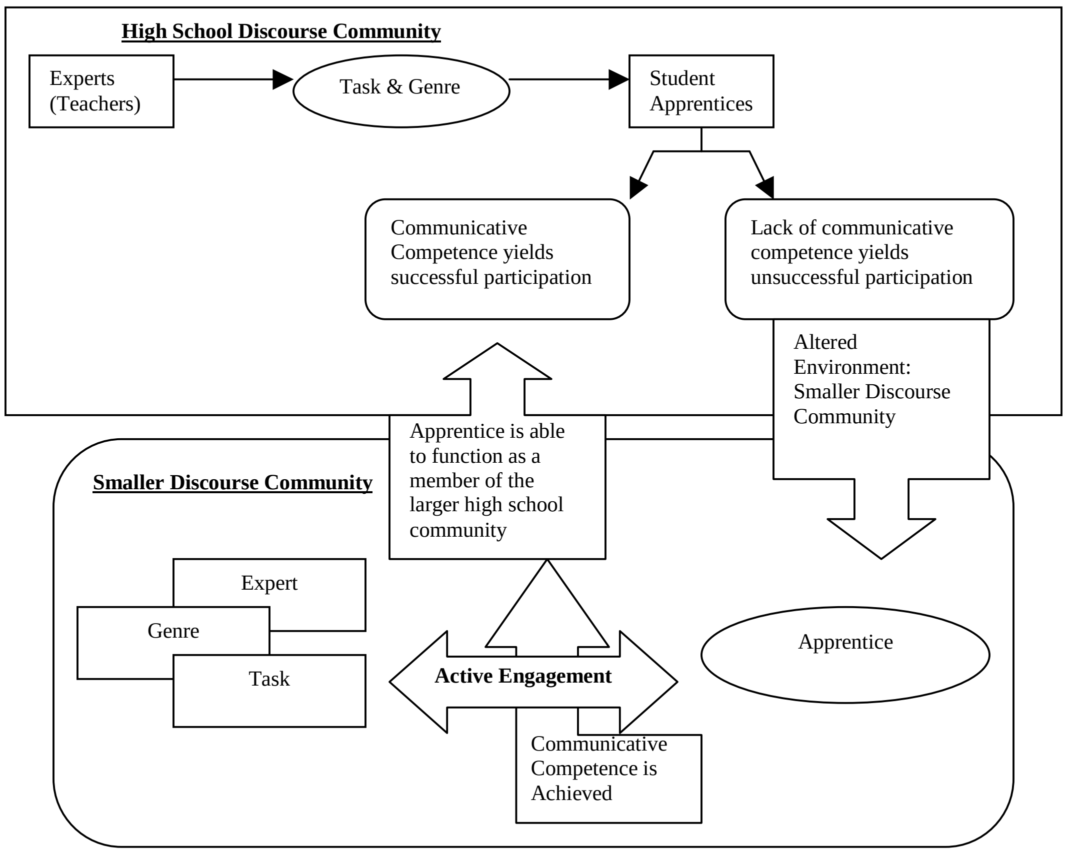
Fourth, the discourse community uses one or more genres to further its aims. In my study, the larger high school community defined these genres. Fifth, members of the discourse community acquire and use a specific lexicon driven by the requirements for efficient communication exchange. Within the smaller discourse community, this lexicon included two things. First, it included technical and textual vocabulary that would allow students to function better in the overall high school community. Second, as the smaller discourse community evolved, we developed a specific lexicon of communicative terms to increase efficiency. Swales' sixth criterion is that the survival of a discourse community depends on a reasonable ratio of experts and apprentices. It is this sixth criterion that Swales (1990) used to define the role of the teacher in a pedagogically designed discourse community. Ideally, tasks within a discourse community are jointly constructed, and Swales (1990) provided examples for how teachers can engage even beginning apprentices in the joint construction of task through such avenues as paired discussion. He also contended that it is the experts, who, through task in appropriate text, are able to begin to engage apprentices in learning to become communicatively competent members of the discourse community. As apprentices become more skilled, tasks can become more driven by apprentices. However, he also stated, "I believe it is unwise to consider it [joint construction] as a necessary condition" (p. 75) all of the time. " Occasions will surely arise when instructors may feel the need for unilateral action, especially when a task-sequence is going wrong, and a repair type task seems warranted" (p.75).

Communicative Competence and Discourse Communities

Figure 1 is a conceptualization of the discourse communities pertinent to my study. The rectangle at the top indicates the high school discourse community. For students who are unable to function within that discourse community, a smaller, altered discourse community, is shown at the bottom. As I elaborate on the development of discourse communities in my study, I refer the reader back to Figure 1.

Figure 1

A Conceptualization of Discourse Communities



One of the goals of my study was to alter the environment of schooling for students in order to provide them with avenues for successful literacy acquisition (Brown, 1992; Swales, 1990). Alvermann and Moore (1991), described schooling experiences for high school as very regimented. High school students do not often get opportunities to interact with text or with teachers in a meaningful way (Goodlad, 1984). Rather, they are required to read numerous pages from subject area textbooks that are often very conceptually difficult and poorly written, (Chambliss & Calfee, 1998) and to answer comprehension questions independently after reading (Durkin 1978-1979). Classroom interaction often consists of the teacher asking a question to which one student provides the answer (Gallimore & Tharp, 1990). This type of discourse community is shown in Figure 1 with the arrows leading from the expert (teacher) through the tasks and texts (genres) the teacher chooses for the student. Note that this conceptualization is delineated with a one-way arrow, indicating that student apprentices had very little opportunity for active engagement. In Figure 1, students were either able or unable to interact within the larger community of high school, indicated by the two bubbles stemming from the student apprentices box.

Brown (1992) discussed at length her attempts to change the environment of schooling to match learner needs. Stanovich (1986) reminded us that more of the same will not create better readers or students who are able to thrive within the social system of the school. The question then became one of how the culture of schooling could be altered to create an optimal learning environment. It may be possible to create such an environment by providing struggling adolescent readers with cognitive challenges in appropriate text within a smaller discourse community that enables the teacher or knowledgeable person to differentiate instruction. Brown (1992) found that changing the environmental setting for students who struggled to read had a positive influence on their reading development, and created a discourse community within which the process of becoming literate could take place. In my study, I predicted that students would gain the communicative competence needed to function successfully in the culture of high school through the building of a collaborative discourse community that altered the learning environment to meet literacy needs. This altered environment is indicated in Figure 1 as the box with the arrow leading from student apprentices who cannot function in high school into the smaller discourse community designed to assist them in developing communicative competence.

Bruner (1991) described literacy as a cultural "tool kit" for knowing and understanding how to engage within a particular culture's literacy system. Swales, (1990) would argue that this "tool kit" of skills is best learned within a discourse community designed to promote students' learning and use of these tools for specific purposes. If students who have reached high school do not possess even a basic understanding of how to engage in literate activity within school culture, then it seems logical that their success in school would be vulnerable.

Communicative competence is a construct with roots in English as Second Language pedagogy. From this standpoint, it means to assist a non-native speaker to the level of his or her English speaking peers (Swales,1990). However, Swales (1990) also contended that those who wish to function successfully within a purposeful discourse community must achieve communicative competency skills that correspond with the norms for both written and spoken language used within that discourse community. He assumed that this is true for both native and non-native speakers of English.

Swales (1990) contended that within a discourse community there are both apprentices, who are beginning to learn how to function within that discourse community, and there are experts, who are able to assist apprentices with this learning. Chapman (1999) defined apprenticeship as taking an active, social role in the process of learning, just as an apprentice to a trade would do. This does not mean that student apprentices are passive learners; rather they are responsive to both the social and the academic and are held responsible for their learning within the discourse community by both the experts, and by their peers.

Students who are apprenticed within a particular discourse community achieve communicative competence through the concept of task (Chapman, 1999; Swales, 1990). A task is a learning goal in which students must become active participants. In direct relation to reading and writing competence, Swales (1990) also theorized that text and task are intertwined and cannot be separated. Students must understand and engage in a pedagogical task within the context of a particular text. Swales (1990) concept of task can be directly related to what Wigfield and Guthrie (2000) termed competence support. Competence support is another way of considering goal oriented instruction. Wigfield and Guthrie (2000) view competence support as a motivational variable in student learning. The researchers theorized that if a teacher is providing clear goals for achievement (competence support), that students' intrinsic motivation should also increase. In Figure 1, in the larger high school community, the task arrow goes only one way. However, in the smaller discourse community, the active engagement arrow going back and forth between the apprentice and the overlapping boxes of expert, task, and genre, indicate that there is an active and reciprocal engagement within the discourse community between the expert and the apprentices, and that text, task, and the choices of the expert are intertwined.

Communicative competence and the interrelationship between text and task can be linked to Bakhtin's (1986) discussion of both oral and written utterances and speech acts, for a communicative purpose. Bakhin (1986) contended that no communicative utterances are entities solely belonging to the speaker or writer. Once an utterance has been committed, the hearer or reader is an active respondent. At the very least, the hearer/reader must comprehend the utterance committed, which involves an act or response within the social context. Bakhtin also discussed written text as a secondary utterance, involving not only those physically present to respond to the utterance, but a third, absent but also active party, the author. Bakhtin, then, would view a discourse community as one in which all members, including the author, react and respond on many levels to spoken utterances and to text. Returning to Swales (1990) concept of task, it is those goal directed activities that engage students in multi-layered active response that are considered a "task." Engagement in pedagogically designed tasks within the discourse community is the avenue through which students begin to become expert members of a discourse community (Swales, 1990).

Genre within the discourse community. Implicit and embedded within the idea of a discourse community designed for adolescent struggling readers, or for that matter, in any discourse community, is the idea of genre. As Swales (1990), Bakhtin (1986), and

Chapman (1999), reminded us, without genre, there would be no way for members of the discourse community to communicate their spoken or written purpose.

Bakhtin (1986) considered all participants of a discourse community equally able to contribute to the collective knowledge of that community. This assumption presupposes that members of a discourse community already share conventions of a speech community (Bakhtin, 1986; Swales, 1990). Vygotsky (1978) made the process of attaining these conventions more clear. As children acquire speech, they are able to restructure their world psychologically and thereby symbolically represent culture through speech. Vygotsky (1978) contended that the same is true of literacy. As students begin to master the conventions of written language, these conventions directly represent speech. However, as children gain skill as readers, the intermediary need for the reproduction of speech as print fades and the child has psychologically shifted thought processes to be able to represent cultural conventions in an abstract form (Vygotsky, 1978). Acording to Vygotsky (1978), it is the ability to manipulate these abstract cultural tools (print) that allows the student to internalize first the culture of print in society and then the culture of print in school.

Vygotsky (1978) criticized education for lagging behind a student’s emerging thought processes, and felt that instruction should be in advance of, and therefore lead, a student’s cognitive development. Once the child has made the cognitive shift to the abstract system of print, he or she is then empowered to organize his or her own environment and to engage in the culture of school (Bakhtin, 1986; Vygotsky, 1978). The students in my study clearly had not been empowered to use the tools of written language in school, nor had their pedagogical experiences led their literacy development (Vygotsky, 1978).

Whereas Swales (1990) did not directly discuss the process of learning to read, he too, presupposed literate activity by indicating that students must have prior knowledge of text in order to continue to learn from text and because he assumed that genre must be accessible in both content and form. In order for apprentices to engage in any academic discourse community, Swales (1990) would argue that students must begin with a grasp of written and spoken language that serves as a tool for further learning within the discourse community. Bakhtin's (1986) belief in the need for a "profound understanding of genre" (p. 67) echoed this. If students do not have a basic grasp of language, they lack the means to engage in academic discourse.

According to both Swales (1990) and Bakhtin (1996), discourse communities emerge for a purpose. Further, Swales (1990) discussed the need for apprenticeship into a new discourse community. Because Swales (1990) discussed pedagogy within discourse communities, he would argue along with Brown (1992) and Chapman (1999) that the goal of the smaller discourse community designed to apprentice students into the high school community should be directly tied to the skills struggling adolescent readers need to be able to operate within the larger culture of school.

Chapman (1999) directly discussed how genre can pedagogically evolve within the discourse community. In keeping with the ideas of Bruner (1991) and Bakhtin (1986), she believed that genre should be approached as a cultural tool, as opposed to a stringent set of taxonomic rules. In this way, through the use of genre, students can become empowered to participate effectively in schooled culture. Chapman (1999) described the acquisition of genre as an emerging process. She linked the learning of this process to writing because it is through writing that she proposed students must grapple with understanding how to use and learn from genre. However, this writing can take many forms. For example, Chapman (1999) suggested that scientific genres can be understood through learning how to communicate scientific data, including the use of charts, graphs, maps, and diagrams.

If genres are considered a cultural tool, they are then situated, social, and active (Chapman, 1999). It is these three ideas that defined Chapman's (1999) beliefs about the pedagogy of genre. Genres are situated because they arise out of particular spheres of human activity (Bakhtin, 1986; Chapman, 1999). Genres are social because they are used by members to interact within a discourse community that has evolved for a purpose. (Bakhtin, 1986). In order for students to participate fully, they must learn to use and discuss genre within the collaborative environment of the discourse community (Chapman, 1999). Finally, genres are active because they require members, including apprentices, to take a participatory role in engagement and learning through and about the genre. As student apprentices learn to use genre, it provides them with an avenue through which they can take responsibility for their own learning in the discourse community (Chapman, 1999; Swales, 1990). Figure 1 indicates this active interrelationship between genre, task, and the expert by the overlapping boxes in the smaller discourse community bubble.

Chapman's theories of genre as situated, social, and active are based on the work of Bakhtin (1986), who defined genre as "relatively stable types of utterances" (p. 60) used within a sphere of communication for a particular purpose. Stability of the utterances (spoken or written) is evident through the compositional structure, style, and content applied to the genre by the users (Bakhtin, 1986). In some ways, the ideas of the discourse community and genre are recursive (Bakhtin, 1986; Swales, 1990). While the discourse community can drive the genres used, genre can also drive, constrain, and develop, interaction within the discourse community. However, for the purposes of my study, I considered the discourse community to be dictating the use of genre because students were invited to achieve communicative competence that would allow them success in the larger high school community. Because the genres used in high school discourse communities are relatively stable across time, they can be viewed as a cultural as well as pedagogical tool for assisting students in developing communicative competence within the high school discourse community. In my study, because adolescent struggling readers took an apprenticeship role in an existing genre with stable cultural and historical norms, I hypothesized that genre was already defined within the smaller discourse communities used in my study.

Purpose of the Discourse Community for Adolescent Struggling Readers

If adolescent struggling readers are unable to function within the larger discourse community, then they need an avenue empowering them to do so (Brown, 1999; Swales, 1990). I hypothesized that creating smaller discourse communities where the knowledgeable other (Vygotsky 1939/2000) or expert (Swales, 1990) could more readily differentiate instruction to meet literacy needs, would enable adolescent struggling readers to gain enough communicative competence to participate in the larger high school discourse community. I further predicted that to achieve communicative competence, adolescent struggling readers would need to possess at least two realms of knowledge:

they must have basic literacy skills, and they must possess an understanding of how to interact with the cultural tools for learning accepted by the schooled community (Bakhtin, 1986; Volosonov, 1973; Vygotsky, 1978). For high school students, the text presented to them within their secondary school courses is the most obvious cultural tool for learning.

Swales (1990) proposed that discourse communities can be identified based on characteristics that differentiate them from speech communities. A speech community is simply a community of speakers who share the same language and linguistic norms. A discourse community, according to Swales (1990), is defined much more narrowly. I designed the smaller discourse community for adolescent struggling readers based on Swales (1990) characteristics of discourse communities. Our discourse communities encompassed two broad goals: basic literacy understanding and understanding of how to negotiate the texts that are part of the larger school culture. Further, students were invited to become full-fledged members of the high school discourse community through their participation in the smaller discourse community as apprentices with the teacher acting as the expert member. I also predicted that when communicative competence was achieved,students would no longer need to be members of the smaller discourse community, but could become functioning members of larger high school culture.

Finally, students within the discourse community came to possess a particular set of genres. These included academic texts structured according to a set of genres that are codified in college composition books and identifiable in instructional materials (Chambliss & Calfee, 1998; Swales, 1990). As part of the culture of schooling, good readers come to understand and use these patterns to construct text representations

(Chambliss, 1995; Meyer, Brandt & Bluth, 1980). One of the goals of the discourse community (Swales, 1990; Vygotsky, 1939/2000) was to engage and to immerse struggling high school readers in these genres thoroughly so they could realize the power of possessing such knowledge.

Task in Text Through Assisted Performance Within the Discourse Community

Swales' (1990) definition of discourse communities is riddled with the notion of task. He defined task as a differentiated, sequenceable, goal-directed activity drawing upon a range of cognitive and communicative procedures that allow apprentices to acquire pre-generic and generic skills appropriate to the purpose for which the discourse community was formed.

Swales, then, saw task in appropriate text as the major access route through which apprentices can become expert in a discourse community. The purpose of the discourse community was for adolescent struggling readers to become academically literate in order to function within the larger high school culture. Through appropriate tasks in appropriate texts, I hypothesized that it would be possible for adolescent struggling readers to flourish.

Swales (1990) discussed methodology and differentiation of task as major access routes toward communicative competence, and provided examples of tasks leading to a goal that could be considered scaffolded activity. This differentiation of task allows experts and apprentices to construct tasks and goals appropriate to the learning needs of its members as well as to the purpose of the discourse community. However, Swales remained non-specific about methodologies for the "procedures of rhetorical analysis, discussion, and anticipation of audience reaction" (p. 81).

While social learning theory (Bakhtin, 1986; Swales, 1990; Vygotsky, 1939/2000; Vygotsky, 1978; Volosonov, 1973) situates both the student and the knowledgeable other within a learning, or discourse community, and explains pedagogical tasks, it may fall short of explaining the cognitive processes that must take place in order for students to develop communicative competence within a discourse community. Gallimore and Tharp (1990) linked the Vygotskian idea of assisted performance, to theories of Western psychology. Assisted performance is the act of helping a student to achieve at a higher level than the student would be able to achieve independently The authors believed that by combining social learning theory and cognitive psychology, the “explanatory power” (p. 177) of each epistemology increased substantially.

The additive power of Gallimore and Tharp’s work is to provide a model of socially situated instruction within the discourse community. The authors drew across many theories and ideologies within Western psychology to determine six areas of pedagogy that have been studied in great detail. From a neo-Vygotskian viewpoint, these six methodologies can be interpreted as types of assisted performance. The teaching methodologies described by Gallimore and Tharp (1990) are: instructing, questioning, contingency management, modeling, feeding back, and cognitive structuring (p. 177).

Instructing is one type of assisted performance Gallimore and Tharp (1990) proposed can be effective in the classroom. The authors stated that instruction must be embedded in the context of other effective types of assisted performance, and that teachers who provide direct instruction are taking responsibility for student learning rather than assuming that students will learn on their own. Duffy (2002) provided a clearer definition of direct instruction. He couched his definition in terms of providing direct strategy instruction to students. This direct strategy instruction is characterized by two elements. First, teachers provide explicit information to students about a reading strategy that the student can learn to control. Second, this explicit teaching is intentional, and provides information about how and when to use the strategy. Duffy (2002) also contended that direct instruction must be immediately followed by practice and application in text. Gallimore and Tharp (1990) explained that the instruction found in typical classrooms is not often conducive to assisting a student toward the next logical level of performance. More often, instructing is either to assign tasks or to regulate behavior. Gallimore and Tharp (1990) further theorized that it is assisted performance via direct instruction that becomes the "self-instructing voice of the learner" (p. 181), which the learner then draws upon in making the transition from other-assisted learning to self-assisted learning (Vygotsky 1939/2000; 1978).

Questioning, a second type of assisted performance, can aid cognitive performance. However, Gallimore and Tharp (1990) reminded us that not all questioning assists performance. Questions that merely *assess* do not assist the learner. An *assistance question* requires the learner to "produce a mental operation that the pupil cannot or would not produce alone." (p. 182) Assistance questions have a twofold advantage. First, they require the student to engage actively in verbal response, which provides students with practice. Second, the assistance question, or string of assistance questions, allows the teacher to scaffold the student in the assembling of information in a logical manner (Gallimore & Tharp, 1990).

In contingency management, rewards and punishments are arranged to shape behaviors. The authors argued that in an effective educational setting, praise and reinforcement are the contingencies provided as a means of assisted performance. Further, such practices do not need to be viewed as classical behaviorism. Rather, praise and reinforcement help to construct an educational setting where emotional safety, and risk taking are encouraged. Praise and encouragement cannot be used as teaching methodologies, but rather to solidify positive learning advances (Gallimore & Tharp, 1990).

Modeling, with its roots in Bandura's (1977) social learning theory, is another way that teachers can assist performance. It offers appropriate behaviors for imitation. Its history is linked to the social and cultural structure of the family (Vygotsky, 1939/2000). Typically, parents model for children, and often do so without the realization that such modeling is taking place. For example, a parent models conventional speech patterns for infant language learners (Ehri, 1975). The authors further contended that modeling can be a very powerful way to assist performance within the school setting (Gallimore & Tharp, 1990).

Feeding back is also a very powerful tool for teachers. However, Gallimore and Tharp (1990) qualified this by explaining that feedback to students about their performance is not successful unless that performance is compared to some standard, or goal, allowing students to use the performance-based feedback to continue making alterations in their thinking until the standard or goal is achieved. Within the small discourse community created for the specific purpose of assisting struggling readers, there were two obvious performance standards; knowing and practicing the strategies used by good readers, and understanding how to negotiate the type of texts used in the high school setting.

Cognitive structuring, the final means of assisting performance is defined by Gallimore and Tharp (1990) as the provision of a structure for thinking and acting. The authors distinguished between Type I structures, which might be as simple as providing a name for a thing, and Type II structures, which move beyond the concrete and provide an abstract way for students to organize thinking. Type II structures are directly related to Vygotsky's (1978) notion that in order to engage in the scientific (academic), learners need to progress beyond concrete examples and create an abstract theoretical model into which a particular type of learning might fall. For example, the knowledgeable other might aid students in the creation of an abstract model for understanding the historically accepted rhetorical patterns of exposition devoid of any textual content. Once students have learned the model, they are then able to apply it to future learning of material that draws upon that construct.

Framework: Challenging Task in Appropriate Text

Using the idea of a smaller discourse community, my research begins to determine effective instructional practices, combined with appropriate text, that might lead to effective learning situations for adolescent struggling readers. To begin exploring what may be effective for adolescent struggling readers, I focused on two essential elements in the process of learning to read. First, because these students already possessed some background and experiential knowledge, they were cognitively capable of a higher-level of thinking than are younger children of the same reading level. Second, in order for students to be able to use their cognitive capacities, they had to learn beginning literacy skills. I hypothesized that students might achieve literacy success through an instructional framework designed to be used within the construct of the smaller discourse community. I further conjectured that through this framework, students would learn to decode while simultaneously using their advanced cognitive abilities to gain communicative competence. As outlined in my framework, students constructed challenging tasks within interesting text at their decoding level. This text also needed to provide avenues for further discussion and comprehension instruction at level of the student's cognitive need (Vygotsky, 1978). In my framework, both text and task were key. Students read books that allowed them to move beyond the text cognitively. The text then became a cultural tool for allowing students further growth (Bruner, 1991;Vygotsky 1978). My dissertation focused on accelerating the literacy skills of struggling adolescent readers through using low-level text to support higher-level comprehension and thinking strategies.

Text was crucial to my study precisely because adolescents possess greater cognitive abilities. As Kintsch (1998) as well as Chambliss and Calfee (1998) proposed, text must be linked in some way to background knowledge. It must also provide interesting content and serve as a bridge to broader cognitive, and curricular goals. Chambliss and Calfee (1998), as well as Guthrie, Wigfield, and VonSecker (2000) indicated that expository texts may provide both the interest and challenge that students need. Texts chosen for this study allowed students to apply what they already knew to new learning situations. I chose expository text that I thought would be inherently interesting and based in real world knowledge while offering avenues for further instruction and exploration.

Assisted performance in task was also key in this study because it had to be working in tandem with text to provide the student with a learning environment where success was possible. The instructional framework I created highlights three separate literacy tasks in appropriate text, unfolds in three phases, and encompasses many important principles drawn from research. In the first phase, *Rereading familiar text*, students engaged in the task of rereading of texts they had already read, designated as "known texts", to provide fluency, decoding and comprehension support (Clay & Cazden, 1990; Millis & King, 2001).

In the second phase, *Direct Guided Reading with word study mini-lessons*, student's task was to negotiate a new text, which they had not already read. I supported this initial reading of a text through the use of cognitive strategy instruction. During *phase II*, students focused on text comprehension by building a repertoire of strategies they learned to use flexibly (National Reading Panel, 2000; Palinscar & Brown, 1984; Pressley, 2000; Smolkin & Donovan, 2001; Snow, et al., 1998; Vaughn, 2000). They also focused on embedded word study in the form of mini-lessons. Instruction in word study occurred through the process of scaffolding the student on an as-needed basis (Clay & Cazden, 1990; Wood, Bruner & Ross, 1976). In my study, I termed these word study mini-lessons within the guided reading phase *point-of-need instruction*, because teacher support occurred at the point where students' own strategy use was insufficient to allow the student to continue through the text.

In the third phase, *Taking apart the text*, students engaged in learning to understand the various rhetorical patterns of the exposition they had just read. These patterns were then added to the student's repertoire of comprehension strategies (Chambliss & Calfee, 1998; Meyer & Poon, 2001).

My framework assumed that combining the tasks of acquiring decoding skill, cognitive reading strategies, and knowledge of text structure, embedded within the environment of the discourse community for the purpose of apprenticing students toward the goal of gaining academic literacy, would allow adolescent struggling readers to accelerate their literacy development. (Bakhtin, 1986; Chapman, 1999; Gallimore & Tharp, 1990; Swales; 1990;Vygotsky, 1978).

Questions Guiding the Study

Based on the idea of challenging task in appropriate text, I posed the following questions:

1. What is the effect of using an instructional framework of challenging task in appropriate text on students' literacy growth over time?
2. What effect does direct instruction in text structure have on students' ability to use the rhetorical patterns in text as a text negotiation and comprehension strategy?
3. How does the model of challenging task in appropriate text affect change in the intrinsic motivation of struggling readers?

The Research Approach

My analysis provided a picture of how purpose, task, and text within the discourse community worked together to provide adolescent struggling readers with learning successes in literacy. To answer the first question about literacy growth over time, I analyzed students' literacy growth using a pre- post- control design. The Qualitative Reading Inventory-3 (QRI-3) (Leslie & Caldwell, 2001) was my primary measure of analysis.

Two types of analyses addressed the effects of text structure instruction. First, I used the pre- post control group design with a text structure measure: the text structure evident in student retellings from the QRI-3. I used a rubric designed to determine whether students were formulating their retellings according to a generic text structure. I used a within-groups counterbalanced design for the second analysis of text structure. During the first nine weeks of instruction half of the students in the instruction group received text structure instruction while the other half engaged in response journaling. During the second nine weeks of the instructional period, the two groups switched. The primary measure used was a teacher-made classroom based assessment (CBA). The CBA consisted of three multiple choice questions; one literal, one inferential, and one about text structure, and required the student to write a summary of a known text. I analyzed the multiple choice questions separately from the student summaries. I utilized the same rubric for analyzing retellings to analyze student summaries. Students completed the Motivation for Reading Questionnaire (MRQ) (Wigfield, Guthrie, and Von Secker, 2000) to answer the final question regarding motivation. The design for motivation was pre-post treatment group only.

Definitions

The following definitions are pertinent to my study:

1. *Challenging Task in Appropriate Text*: A problem, presented either by the reader or the instructor, that assists the reader in engaging in higher-level thought and comprehension processes using text that is at the reader's decoding level (Morris, 1999; Swales, 1990).
2. *Communicative Competence*: The ability of a member of a discourse community to communicate successfully with other members by using the community's spoken and written norms (Swales, 1990).
3. *Competence Support Theory*: Enhancing students' motivation to engage in learning by providing clear learning goals and appropriate levels of teacher-assisted performance to help students attain those goals (Guthrie, Wigfield & VonSecker, 2000).
4. *Discourse Community*: A community of speakers, writers, and learners who are members of a group which has been established for a specific communicative purpose and which uses a particular set of norms for communicating that have been agreed upon by all members (Bakhtin, 1986; Swales, 1990).
5. *Genre*: "Relatively stable types of utterances" (Bakhtin, 1986, p. 60) used within a sphere of communication for a particular purpose. Because users consistently apply compositional structure, style, and content, stability of the utterances (spoken or written) is evident.

6. *Graphic Organizer*: A chart that uses content related vocabulary or ideas to help students anticipate and/or understand relationships among concepts found in text (Vacca & Vacca, 2002).
7. *Graphic Representations of Text,* or *Text Maps*: Charts depicting the relationship(s) among the structural patterns the author uses to organize a text (Chambliss & Calfee, 1998).
8. *Higher-Order Thought Processes*. "A form of complex thinking, especially of a logical or abstract type (Harris & Hodges, 1995). They further define *higher mental functions* as functions that "require voluntary self regulation, conscious realization, and the use of signs of mediation" (p. 107) (Vygotsky 1986, in Harris & Hodges, Eds. 1995). I define higher order thinking skills as those skills, as outlined in the definitions above, that students use in cognitive processing of text beyond literal comprehension and beyond decoding.
9. *Point-of-Need Instruction*: Teaching methodology that provides a child with reading instruction, primarily word study instruction, at the immediate time a child encounters a difficulty with text. It stems from the scaffolding work of Wood, Bruner, and Ross (1976), as well as from assisted performance (Vygotsky, 1934/2000). Clay and Cazden (1990) discuss "temporary instructional detours" (p.217) occurring while the child is reading, through which, the "child's attention is called to particular cues available in speech or print" (p.217).
10. *Socially Assisted Performance*: Assisted performance by a knowledgeable other within a socially mediated learning environment that allows for student

success. This idea is based on the theoretical construct of construction of meaning within a social setting or situation. In my study, the social setting is the culture of school as well as the sub-culture of small group instruction (Moll, 1990). The following three definitions are important to the ideas of socially assisted performance.

- *Assisted performance:* Appropriate adult guidance that scaffolds a student to a new level of performance that the child could not attain independently. (Gallimore & Tharp, 1990; Vygotsky 1934/2000, 1978)
- *Knowledgeable other:* The teacher, or other adult, who is responsive to the student's needs and is therefore able to assist the child with academic progress (Vygotsky 1939/2000, 1978).

11. *Release of Responsibility*: Allocation of responsibility, as appropriate, to the student for independent performance of a newly learned task. It is important to note that release of responsibility occurs on a continuum. Responsibility is not simply released to the student on the assumption that one introduction to a task will be sufficient to allow the student to engage in that task independently (Vygotsky, 1934/2000).

12. *Summarization*: A brief constructed written or spoken statement containing the essential ideas of a longer passage of text which shows the reader's ability to "transform and reduce the full meaning of the text into its gist" (Winograd, 1984, p. 405), or overall essence.

- *Retelling:* For the purposes of this study, an oral summarization of a text read.

13. *Text*: Written print used as an instructional medium in this study. The following three definitions are pertinent to the meaning of text in this study.

    - *Narrative text*: A written story that expresses event-based experiences selected by the author (Harris & Hodges, 1995). In my study, narrative text will always refer to a fictional story.
    - *Expository text*: A written composition where the author's primary intent is to inform, argue, or explain (Chambliss & Calfee, 1998; Weaver & Kintsch, 1991).
    - *Appropriate Text*: Text that contains structures and features that match the reader's instructional literacy needs.

13. *Textually Assisted Performance*: Providing students with texts containing elements such as coherent text structure, links to interest and background knowledge, text features (Chambliss & Calfee, 1998), and concept density (Chall, Bissex, Conrad & Harris-Sharples, 1996) to support student learning.

14. *Text Structure*: The rhetorical patterns or organizational structures of text that link the ideas in the text logically (Chambliss & Calfee, 1998). Authors use these historically accepted generic patterns to organize text within a particular discourse community (Bakhtin, 1986; Chambliss & Calfee, 1998).

15. *Word Study*: All of the principles of early reading that students must acquire, such as knowledge of phonics, spelling patterns, and a sight word vocabulary.

Overview

This dissertation examined how a framework that brought together challenging task in appropriate text embedded within a discourse community designed to allow struggling readers to achieve literacy success, (Swales, 1990) could serve to accelerate the literacy growth of adolescent struggling readers. Further, it also examined the role that direct text structure instruction played in literacy achievement for these readers. Finally, it looked at the effects of a direct instructional model on students' intrinsic motivation for reading using the theory of competence support (Wigfield et al, 2000).

In chapter 2, I explore the connections between the discourse community and my framework of Challenging Task in Appropriate Text. First, I discuss research on each of the three task *phases* of the framework: rereading familiar text, cognitive strategy acquisition, and text structure instruction. In the second major section, I discuss research on text, including models of text processing, how readers process text, and the elements of text that I hypothesized must be present for text to be considered appropriate for adolescent struggling readers. I end by discussing how reading performance would look within the discourse community, the role of the teacher and the task, and how motivation interfaces with those roles.

Chapter 3 details the intervention experiment. I explain how participants were selected for the study, random assignment to the instruction and control groups, and my use of the counterbalanced design to assess the effects of text structure. I then provide rationales for the use of the Qualitative Reading Inventory-3, the texts chosen, and the *retelling and summary scoring rubric* I designed as a measure for this study. Finally, Chapter 3 outlines how text analysis of both classroom texts and the QRI-3 retellings was performed. Chapter 3 also describes the instructional intervention in detail using clips from tape recorded class sessions. I provide this description to highlight the evolution of the discourse communities from the beginning to the end of the instructional time.

In chapters 4 and 5, I present the results and discuss the findings of my research. Chapter 4 highlights key findings about overall literacy growth, the text structure measures, and motivation. In chapter 5, I present the most important outcomes of the study along with implications for research and practice. Chapter 5 also includes a discussion of the limitations of my research.

Chapter 2

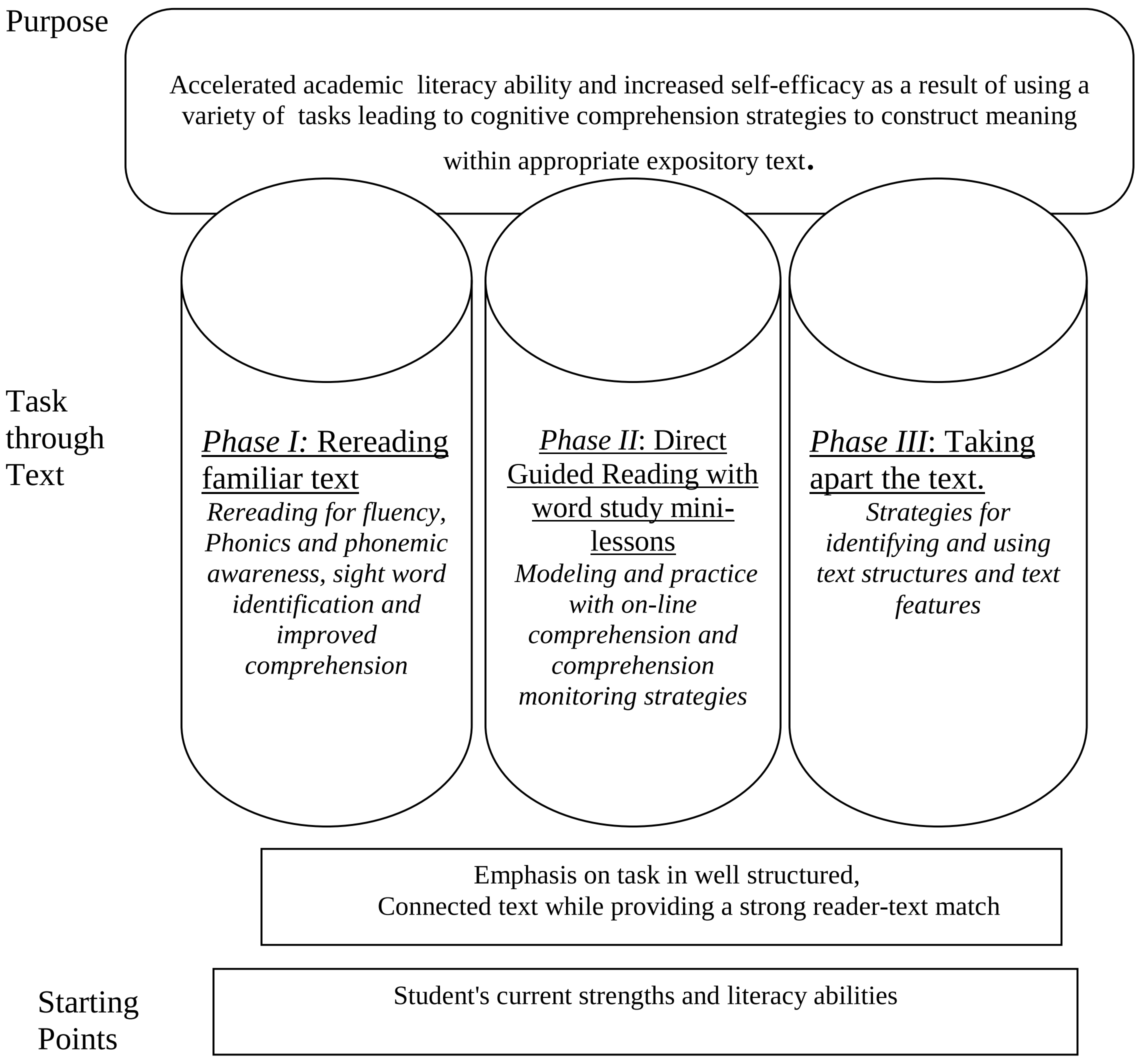
Challenging Task in Appropriate Text within the Discourse Community

In my study, I proposed the use of discourse communities through which adolescent struggling readers could learn communicative competence (Swales, 1990) for the specific purpose of becoming literate members of school culture (Swales, 1990; Bakhtin, 1986). I hypothesized that this discourse community must provide for two learning goals: students must learn basic literacy skills, and they must learn how to negotiate the texts used within the culture of the school (Swales, 1990). Learning within such a community is particularly social because learning and understanding is dependent upon the members' exchange of both verbal and written ideas (Bakhtin, 1986; Swales, 1990; Vygotsky, 1939/2000). Because discourse communities in school are formal (Bakhtin, 1986), they are inherently dependent upon text, and consequently, upon communicative competence (Swales, 1990) within the realm of the social. In an academic discourse community, text and the genres into which those texts fall are a primary means for communication among community members (Bakhtin, 1986; Chapman, 1999; Swales, 1990). I also proposed a linkage between the social elements of the discourse community (Bakhtin, 1986; Vygotsky 1939/2000) and the psychological processes that the discourse community makes possible for its members. (Gallimore & Tharp, 1990) to explain learning changes within the realm of the social.

Both Swales (1990) and Bakhtin (1986) presupposed that members of a discourse community are able to engage in literate activity. The purpose of the smaller discourse communities used in my study was to support struggling adolescent readers in the attainment of communicative competence (Swales, 1990). I hypothesized students could accomplish this goal through my instructional framework of challenging task in appropriate text. Therefore, I invited students into discourse communities structured around the principles built into that framework. The framework of challenging task appropriate text is illustrated in Figure 2. This chapter contains two major sections: task and text. The section on task is organized around the three cylinders found in Figure 2 showing the three major tasks of the instructional framework. The second section discusses models of text processing and text processing research. A final section considers how the instructional framework would look within the discourse community.

Figure 2

Illustration of the Instructional Framework Situated within the Discourse Community: Challenging Task in Appropriate Text



Research on Instruction to Increase Reading Performance

I hypothesized that in order for adolescent struggling readers to accelerate their literacy growth and gain communicative competence within a genre (Swales, 1990), instruction within the discourse community would need to be based on an integrated model (Lipson & Wixson, 1996) of literacy instruction, whereby students could gain both beginning literacy ability as well as text comprehension and negotiation strategies. This section discusses the research relating to the phases of the integrated model I have illustrated in Figure 2. In this section, I first discuss research related to rereading, shown in the first cylinder (*Phase I*). I then discuss research that supports both cognitive strategy instruction as seen in *Phase II* (the second cylinder of Figure 2), as well as text structure instruction (*Phase III*, or the third cylinder).

Research on Rereading

Using rereadings as a teaching methodology has become accepted practice in early intervention programs, and is viewed as an important lesson component in these programs (i.e. Clay & Cazden, 1990; Center et al., 1995; Morris, 1999; Santa, 1999). However, two bodies of knowledge exist that may provide support for using rereadings as part of an integrated reading program. The first stems from early literacy research that explored the effects of stand-alone methods to improve fluency and comprehension as well as early intervention research that employed rereading as part of an integrated program (Clay & Cazden, 1990). The second comes from research on incidental vocabulary acquisition.

Early Literacy Research on Rereading. Rereadings of the same text have historically shown to improve children's oral reading fluency and comprehension (i.e. Samuels, 1979; Young, Bowers & Mckinnon, 1996). However, studies of repeated listening (Eldredge, 1990) as well as studies of other fluency strategies such as echo and choral reading have also assisted children in improving oral reading fluency and comprehension (Dowhower, 1987; Rasinski, 1990). In their 1993 study, Roman, Klesius, and Hite compared the effects of repeated readings to assisted non-repetitive strategies such as echo reading, unison reading and cloze reading. During echo reading, the teacher modeled a section of text fluently, and the students repeated that section of text. During unison reading, the teacher and students read together. During cloze reading, the teacher read, but stopped periodically to allow the students to read the next word.

Participants were 26 sixth graders in Chapter 1 programs. They were reading approximately two years below grade level. Thirteen students were assigned to the rereading treatment and 13 were assigned to the assisted non-repetitive condition. Students worked in small groups of 3 to 5 with their teachers three times per week for 20 minutes of treatment that spanned seven weeks. The treatment took place during the regular language arts time. In the non-repetitive condition, teachers and students used echo, unison and cloze reading. In the repeated reading condition, students repeatedly read a selection of text four times with no prompting. Otherwise, texts and treatment conditions were identical across the two groups.

Pre and Post test measures were a commercially prepared informal reading inventory and a published basal series workbook. There were two passages each at grade levels four, five and six. To control for passage difficulty, each set of passages had a form A and B. At pretest, if a student was given form A, she received form B at posttest. A repeated measures multiple analysis of variance indicated a statistically significant effect from pre to post testing for both treatment conditions (Wilks's Lambda = .62, $F\ (3,22) = 4.37$, $p < .05$). There were no significant main effects for treatment (Wilk's Lambda = .89, $F\ 93, 22) = .977$, $p > .05$). A univariate ANOVA showed significant comprehension gain for both groups between pre and post tests ($F\ (1,24) = 11.40$, $p > .05$).

These results indicated that both the repeated readings and the non-repetetive strategies improved comprehension among sixth graders. The authors concluded that the specific type of methodology used seemed to be secondary (Roman et. al., 1993). However, rereading of familiar text has also become a typical part of early intervention lessons for very young children determined to be at risk for reading failure (i.e.Clay & Cazden, 1990; Leslie & Caldwell, 1999; Morris, 1999; Santa, 1999). The rereading of familiar stories during intervention lessons stems from Clay's (1985) Reading Recovery work. Her contention was that children needed to learn to use integrate, and practice strategies across all three cueing systems: grapho-phonic, semantic, and syntactic, in order to develop a "self – improving system" for improving literacy performance (Clay & Cazden, 1990) through the repeated use of natural language to teach students how to gain meaning from text (Clay, 1985).

A major tenet of the Reading Recovery (RR) framework, is that children are taught to use strategies across the three cueing systems as they are reading a novel text. The children are then expected to become responsible for their strategy use as they reread what has become a familiar text (Clay & Cazden, 1990). During the rereading of familiar text, teachers are to provide less direct instruction and allow the student to practice his or her use of learned strategies. This rereading of familiar text accomplishes something that non-repetitive strategies may not. The rereadings allow the child to practice strategies in connected text independently (Clay & Cazden, 1990).

Wong, Groth and O'Flahaven (1994) conducted a study to determine the amount and types of scaffolding (Wood, Bruner & Ross, 1976) or assisted performance (Tharp & Gallimore, 1990) that Reading Recovery teachers used with students as they approached both new and familiar texts. Five RR teachers were videotaped during RR sessions with two students on two consecutive days. Two sections of each 30 minute tape were selected for coding. The researchers identified five major types of scaffolding: Telling, modeling, prompting, coaching, and discussing. Five two – way ANOVAs were conducted to determine differences in the types of scaffolds teachers used with new and familiar texts.

Teachers all used more telling, coaching, modeling, and discussing when reading a new text with a student. However, the result of interest to rereadings, is that teachers used more coaching scaffolds when students were rereading familiar text (33.8%), than when they were reading new text (20.1 %). This difference was statistically significant ($t = 14.968$, $df = 49$, $p < .0001$). The researchers defined coaching as providing the reader with a new perspective by taking her outside the reading act. Coaching scaffolds focused on how the student performed or responded, and were divided into five sub-categories: structural, meaning, visual, oral reading, and procedural. Although the teachers coached these five cues similarly in both new and familiar text, there were more coaching comments and fewer other types of scaffolds during the rereadings.

This study suggested that teachers varied the amount and type of scaffolding as a function of whether or not the text was new or familiar. It also suggested that students may need to be interdependent, as is evidenced by more scaffolds in new text, before they can learn to become independent (Wong, et al., 1993). Because teachers used fewer scaffolds during the rereadings, but still provided some scaffolds, this study highlighted the importance of rereading as part of an overall intervention program. Students were given a chance to practice in familiar, connected text with as few prompts as possible, but because they still needed some coaching prompts, it is clear that they were not yet independent, even with the familiar text.

What is important about models of early intervention is that they focus on interaction between the child and the knowledgeable other in a learning situation that can be likened to a small discourse community. The interaction is one of assisted performance that ultimately helps the child achieve a new level of independent performance (Clay & Cazden, 1990; Vygotsky, 1934/2000).

Rereading and Vocabulary Acquisition. Stanovich (1989), indicated that one of the major issues with the Matthew Effects in reading was that students who read more gained more vocabulary knowledge. Students who read less, gained fewer new vocabulary words, and consequently, read less. In suggesting this effect, Stanovich (1989) drew upon the landmark work of Nagy and his colleagues. A 1984 study by Nagy and Anderson attempted to determine the numbers of words children are responsible for reading throughout their schooling from grades three to nine and concluded that it would be impossible to directly instruct children on all of the vocabulary words they encounter in school texts. The researchers also considered word frequency distribution, and found that most words were encountered infrequently, and words with higher frequencies were often not semantically related to other, similar words. The authors conjectured that it is not possible for such a breadth of reading vocabulary to be taught, particularly when teachers spend little time in vocabulary instruction. Therefore, they contended that any approach to vocabulary should contain activities that would allow children to learn new words independently. They hypothesized that the primary avenue for vocabulary growth was through language, and in particular, written language (Nagy & Anderson, 1984).

A 1985 study by Nagy, Herman, and Anderson, attempted to determine whether eighth-grade students learned vocabulary words incidentally through reading. Fifty-seven students read either a narrative mystery story or an expository piece about river systems. The most difficult words from each passage were chosen as target vocabulary words. After the students read the passages, they were asked to complete a multiple choice test to identify the target words. An analysis of variance revealed a statistically significant interaction of learning from context with prior target word knowledge on the multiple choice measure ($F(1, 5046) = 7.58$, $p < .01$.), indicating that students learned more about words that were not previously known. This result also indicated that vocabulary learning from context was independent of prior word knowledge. Further, the result was consistent across both narrative and expository text.

Jenkins, Stein, and Wysocki (1984) found similar results. Fifth grade students (N=112), identified as more or less able readers as measured by the California Achievement Test participated in the study. Half the students received incidental instruction through paragraph readings containing vocabulary from one of three sets of 18 target words identified as low-frequency. The other half of the students had no pre-exposure to the words. A 2x2x3 factorial design was used. Pre-exposureto target word sets was the only within subjects factor. Reading ability, context (students were assigned to read either 2, 6, or 10 contextual paragraphs containing a target word), and word set (one of three paragraph sets was assigned to each child) were the between subjects factors. The other two sets of paragraphs served as no-context controls.

Post testing contained three measures: supply definition (students had to write the meaning), select definition (multiple choice), and sentence completion (multiple choice of a set of words that best fits). The word set factor was significant for supply definition ($F(2,89) = 5.9$, $p < .001$) , for select definition ($F(2,88) = 15.1$, $p < .001$) and for sentence completion ($F (2,89) = 24.0, p < .001$). Across all three measures, higher ability students out-performed lower ability students. For supply definition, high and low- ability means were 57% and 29% respectively, for select definition, 78% and 53% respectively, and for sentence completion 69% and 57% respectively. Student Neumann-Keuls tests revealed an effect for context. Two exposures differed significantly from 10 exposures ($p <. 05$) but six did not differ significantly from two or ten, a finding in direct contrast to Nagy et. al. (1984).

Many implications from this study are of import. However, the most important finding in relation to my study was that the low achieving students scored less well on all measures. The researchers hypothesized that for those students, simple breadth of reading might not be sufficient. These students might need repeated exposure to the same vocabulary words in supportive context (Jenkins, et al., 1984).

Cognitive Strategy Acquisition

While assisted performance can occur during rereading time, as evidenced by Wong et al. (1994), it is best highlighted through research that focuses on the direct learning of cognitive reading strategies. Gallimore and Tharp (1990) situated their six means of assisting performance within an interactive “activity setting” (p. 190) including both the cognitive, the social, and the task. What must happen within the activity setting is the “instructional conversation” (p.196) where teachers *teach* via means of assisted performance using clear tasks. They also discussed the need for performance to be compared to some attainable standard (Gallimore & Tharp, 1990). In this section, I discuss cognitive comprehension strategies that can be seen as both the tasks (Swales, 1990; Tharp & Gallimore, 1990) and the attainable standards students are encouraged to achieve through the six means of assisted performance.

This section focuses on the second and third cylinders in Figure 2. I first consider research that relates to comprehension instruction situated within the social context of the discourse community. I then discuss what is known about the effects of text structure instruction. Finally, I consider word study research.

Socially situated comprehension instruction. There is a wealth of research on strategy instruction in classrooms. Paralleling Tharp and Gallimore (1990), Smolkin and Donovan (2001) identified a list of “cognitive acts that teachers, through modeling, scaffolding, and direct instruction were to encourage students to perform" (p. 101). It is important here to make a distinction between reading strategies taught by educators and the acts that children perform as they read. The term *strategies* is often used interchangeably. Teachers discuss the teaching of strategies, or strategy instruction, which is a very different process from actual student internalization and use of strategies, which I termed reading strategically, or strategic reading. The cognitive acts Smolkin and Donovan (2001) defined are: monitoring comprehension, generating and answering questions as well as drawing inferences, mental imagery, activating prior knowledge, summarizing, using fix up strategies, and activating knowledge of text structure. Understandably, this list is not exhaustive, but it does match to some degree the findings of the National Reading Panel's (2000) work on research based strategies.

In their 2000 report, the National Reading Panel (NRP) confirmed the need for the direct teaching of comprehension strategies.

> The rationale for the explicit teaching of comprehension skills is that comprehension can be improved by teaching students to use cognitive strategies, or to reason strategically when they encounter barriers to understanding what they are reading. Readers acquire these strategies informally to some extent, but explicit or formal instruction in the application of comprehension strategies has been shown to be highly effective in enhancing understanding (p. 14).

The authors of the NRP report considered numerous comprehension studies and found seven comprehension strategies, which they contended, are research based. Those strategies were listed as follows: comprehension monitoring, cooperative learning, use of graphic and semantic organizers, question answering, question generation, use of story structure, and summarization (National Reading Panel, 2001).

Palinscar and Brown (1984) designed four comprehension strategies to be used with small groups of seventh-grade students who were experiencing difficulties with text comprehension. The strategies they chose were summarizing text, clarifying text when needed, predicting, and questioning. The researchers hypothesized that students who struggle with comprehension needed to engage in "active and aggressive interaction with text." (p. 121)

To test this hypothesis, they designed a context for instruction in which the "novice is encouraged to participate in a group activity before she is able for perform unaided, the social context supporting the individual's effort" (p. 123), echoing the discourse community theories of Bakhtin (1986) and Swales (1990), as well as ideas of assisted performance (Tharp & Gallimore, 1990; Vygotsky, 1978).

Palinscar and Brown (1984) conducted two separate studies. In the first, they acted as the teachers. They discussed their role in this study as one of facilitators, where they provided assistance with the cognitive strategies only as needed by students, echoing Gallimore and Tharp's (1990) idea of teaching task through assisted performance. The second study was a follow-up training study in which the researchers trained classroom teachers to use the RT model.

In the first study, 24 seventh-grade readers who were poor comprehenders but who were decoding at least at the fourth grade level were chosen to participate. The students chosen were not labeled as learning disabled. The 24 students were divided into four groups of six students each. Group 1 (RT) received instruction in the four reciprocal teaching strategies. Group 2 (LI) received instruction on locating information in text. Group 3 (TO) was a test only group. They did not receive instruction but took all of the assessments designed by the researchers. Group 4 (PT) received only the pretests and post tests.

The researchers selected 13 science and social studies passages with a Fry readability of grade seven for the RT and LI instruction. They also used 45 shorter assessment passages from the same source as the teaching material. Ten comprehension questions were constructed for each assessment passage. Each question was either *text* *explicit*, *text implicit*, or *script implicit*, meaning that the reader had to use both the text and background knowledge to answer the question. Students in all but the control group were also asked to summarize various assessment texts.

Students in the RT and LI groups received 20 days of instruction. In the RT condition, three pairs of students each worked with an adult teacher, forming a community of three. The LI group was treated identically; however, their instruction focused on how to retrieve answers from text along with practice in test taking.

The researchers found that, compared to the locating information group, the test only group, and the true control group, the students receiving the Reciprocal Teaching (RT) showed increased improvement. Their ability to answer main idea questions rose from 54% to 70% of questions asked. Incorrect summary statements declined from 19% to 10%, and, the RT group maintained their improved level of performance after eight weeks.

The RT studies also compared the RT condition to a control condition. Students in the control condition received no intervention. One of the ways the researchers measured comprehension outcomes was to create baseline scores on daily comprehension passages. For 20 days, students were asked to read a short passage and answer the ten comprehension questions. These passages were novel to the students in both the RT condition and the control condition. In the control condition, 13 students had been identified by their teachers as being "average readers." The comprehension passage scores of these average readers was computed to create a baseline of average seventh-grade reading to which the RT students could be compared. The baseline for average readers was determined as having answered 75% of the comprehension questions correctly. When compared to the 75% baseline, the RT condition surpassed this baseline to reach 80% comprehension, whereas all three of the comparison groups who received other instruction but not RT, were at 50% or below on the comprehension measures at the maintenance phase. In the RT studies, the researchers created a small-group discourse community that provided students with an avenue for achievement (Swales, 1990). Further, the strategies taught and used in the discourse community allowed students to achieve competence support (Wigfield, et al., 1997) through assisted cognitive strategy performance via task (Gallimore & Tharp, 1990; Swales, 1990; Vygotsky,1978).

In their second study, instructional and assessment methods were similar to those of the original study. Four classroom teachers received three sessions of training in the RT process, and worked with two classroom reading groups for low readers and two groups of readers who were receiving pull-out reading services. Reading achievement results for this study were similar to those for the original RT study. The authors concluded that the classroom teachers, after training, were also effective in implementing the RT model (Palinscar & Brown, 1984).

Other research supports the use of collaboration among peers for the successful teaching and learning of cognitive comprehension strategies. Vaughn, Klingner, and Bryant (2001) used a model similar to Reciprocal Teaching (Palinscar & Brown, 1984) in their studies of Collaborative Strategic Reading (CSR). CSR has been researched across grades three to eight, and with regular education, special education, and second language learners. All studies have indicated positive growth in reading when the CSR model was implemented by classroom teachers (Bryant, Vaughn, Linan-Thompson, Ugel, & Hamff, 2000; Klingner & Vaughn, 1996; Klingner & Vaughn, 2000; Klingner, Vaughn &

Schumm, 1998). The CSR model focused on four strategies. The first was activating background knowledge and making predictions prior to reading, known in CSR as the Preview Strategy. The second was monitoring reading and enhancing vocabulary development during reading, known as the click and clunk strategy. The other two involved identification of the main ideas while reading and summarizing key ideas following reading (Vaughn, Klingner, & Bryant 2001). Key to the CSR process was that students were actively engaged in their tasks and became involved in assisting their peers. CSR teachers have also noted that this collaboration allowed students who are second language speakers to communicate ideas and conceptual knowledge in their first language.

Klingner, Vaughn, Argulelles, Hughes, and Leftwich (2004) recently conducted a follow-up study looking at the implementation of CSR in 10 intermediate classrooms across five metropolitan schools where the student population was primarily Latino/a. Five classes were assigned to the CSR condition and five classes were assigned to the control condition. The CSR teachers received a full-day training on how to implement CSR as well as on the theoretical background of the cognitive strategies used in the CSR model. CSR teachers implemented the CSR model one day per week during language arts for the course of a full school year. The *Gates –McGinitie* was used as a pre- and post – test measure of reading achievement. Post test results indicated that the CSR classes made higher comprehension gains ($F(1, 208) = 6.39$, $p = .01$). On a prompted think aloud protocol administered at pre- and post-testing, LD students in the CSR classes showed more gains in strategic knowledge than their peers in the control condition, although this outcome was not statistically significant. The researchers based this finding on an examination of the effect size (*d* = .49). In general, students in classes whose teachers adhered strictly to the CSR model across the year-long study made more comprehension gains than students in the CSR classes whose teachers moved away from the use of CSR in the classroom.

While research techniques have varied across studies, the CSR model has some advantages. It has been successful across varied grade levels and varied populations of students, including regular education students as well as both learning disabled and second-language learners. Further, it built directly from the work of Palinscar and Brown (1984). Finally, effective implementation of the model created an environment where students worked in collaborative groups, sharing information and receiving assisted performance through strategy instruction from their peers as well as from their teacher, for the purpose of becoming better readers.

Text structure instruction. Swales (1990) contended that content schemata and text schemata cannot be divorced, but "contribute to a recognition of genres and so guide the production of exemplars" (p. 86), and that both contribute to comprehension of text as well as to the formulation of a model for the way in which writers structure text within a particular discourse community. For Swales (1990), there is a logical connection between the formulation of text schemata and direct instruction within a discourse community, and he called for research in this area. He contended that, regardless of inadequate knowledge from research in schema theory, if students are not given multiple opportunities in text, then their formulation of textual schemata will be incomplete, and textual understanding will be compromised.

In the previous section, I framed comprehension strategy instruction within the realm of the social and linked it to discourse communities. As Swales (1990) and Chapman (1999) made clear, it is possible as well as important, to situate text structure instruction within the social. Past research on the effects of text structure instruction has not done so. However, it does indicate some promising results. Therefore, in this section, I present four studies that shed light on how readers can learn from direct instruction in text structure.

In their 2001 study, Meyer and Poon (2001) hypothesized that adults who were trained in the identification of top-level structures would employ a strategy switch, moving from a listing strategy to a top-level structuring strategy. To test their hypothesis, 121 older and younger adults participated. Adults were assigned to one of three groups; strategy training, interest-list training, or the control group. The two training conditions each received ten 90-minute training sessions. The structure group was taught to identify top-level structure in text, while the interest-list group was taught to identify personal interest in text. All subjects read two of four well-structured passages at pre- and post-testing. Each of the two passages included a signaled and an unsignaled form. The signaled form was included because the researchers hypothesized that signaled passages may assist readers in identifying top level structure. The passages were administered in a counterbalanced order. All groups summarized the passages read. To assess transfer, participants watched and summarized a video about nutrition as well as read a number of passages about breast cancer research, and created a summary across the passages. Recalls were scored using Meyer's (1985) system of text analysis. While the groups differed on age at pre-testing, they did not differ in their use of top-level structure. Post-test results indicated that participants who were trained in the structure strategy out-performed both the interest list and the control groups on a number of variables. The structure strategy group increased total recall of the instructional texts ($F(2,109) = 6.22$, $p = .003$), recalled more of the important information from the texts ($F(2,109) = 4.06$, $p < .0005$), and wrote superior summaries (Tukey $a < .0005$). Sixty-five percent of the group receiving the strategy training who also read the signaled texts used structure strategy more consistently whereas only 33% of the structure strategy group who read the unsignaled texts used structure strategy consistently, indicating an added effect for signaled text at the point of immediate recall.

On two free recall transfer tasks, participants were asked to watch a video about nutrition (problem/solution) and then read conflicting paragraphs about breast cancer treatment, and make treatment decisions about both as well as recall both. Participants in the training group outperformed the other two groups on the nutrition video ($F(1, 81) = 10.11$, $p < .002$). On the top level structure scores from the post tests about nutrition the treatment group indicated the only statistically significant effects ($F(1, 82) = 31.15$, $p < .0005$). On the nutrition recall, participants in the training group tended to use problem/solution 65% of the time, whereas only 10% of the adults in the interest – list group used a problem solution organization (x^2 (1, $N = 87$) = 21.83, $p < .0005$). On the top level structure scores about breast cancer, the treatment group again out-performed the interest-list group ($F(1,79) = 46.11$, p.$< .0005$) and tended to use either a compare/contrast or problem solution structure 77 percent of the time to organize recalls (x^2 (1, $N = 83$) = 19.53, p. $< .0005$).

Three studies of the use of text structure instruction with intermediate and middle-grade students have shown promising but mixed results. Taylor and Beach (1984) researched the effects of teaching students to create hierarchically related outlines from text they had read. Seventh grade students ($N=114$) in three classrooms were randomly assigned to the treatment condition, a traditional instruction comparison, or a control condition. Students in the treatment group received seven instructional sessions on locating the hierarchical structure in text. Students in the comparison condition used the same social studies passages but focused on answering a set of 15 main idea and detail questions for the same amount of instructional time. Students in the treatment group who were taught to locate relationships in text outperformed their peers on text recall as measured by written summaries ($F(2, 106) = 5.06$, $p < .01$). However, on a short answer assessment, there were no differences between the treatment and comparison conditions, although both groups scored better than the control condition (Tukey post-hoc $p < .05$). On a summarization post-test, a significant main effect was found for time ($F(2,111) = 182.43$, $p < .001$) and a Tukey post-hoc ($p < .05$) indicated that the experimental group wrote better summaries.

Armbruster and Anderson (1987) conducted a similar study with fifth grade students. Four classrooms of students ($N=87$) were assigned to either to the text structure training or to the traditional instruction group. Text structure students received training on defining, describing, and graphically representing problem/solution text. The traditional group used the same text, but focused on questions that accompanied the social studies passages. All training was completed in the classroom by one of the researchers for 11 consecutive school days in 45 minute blocks of time. Pre and post test measures consisted of an essay question, short answer questions, and a summarization task. All testing passages were also social studies passages. Significant main effects were found for the training condition on the essay test ($F(1,70) = 7.24$, $p < .01$). A Student Neuman Keuls post hoc indicated that the structure training group scored significantly higher than the traditional group ($p < .01$). The short answer test did not reveal any significant effects for group. On the written summaries, a significant training by importance interaction effect was discovered ($F(4,272) = 17.5$, $p < .0001$). Idea units in the summaries were scored for their importance to the overall gist of the passage. Students in the structure training group tended to include more of the most important ideas in their summaries as compared to the traditional instruction condition.

Finally, Berkowitz (1986) considered the effects of graphically depicting exposition according to its global structure. Ninety-nine sixth-grade students were assigned to one of four conditions: map-construction, map-studying, question answering and text re-reading. Students were given one 45 minute lesson each week for 6 weeks by their regular classroom teachers. Students in the map-construction condition learned to represent the structure of the text graphically by engaging in a mapping activity. Students in the map study condition learned about the structure of the text through text maps that were prepared by the researcher. Berkowitz (1986) found that the map-construction condition fostered significantly greater free recall on a summarization task ($F(3, 79) = 8.00$ $p < .01$). Again, no differences were detected between groups on a short answer measure. Interestingly, the map-study group did not score any better on any measures than either of the control conditions. This finding directly supports Chapman’s (1999) supposition that in order for students to become skilled in understanding and using genre, that they must be active participants in the process.

A common theme across the studies reviewed is their use of summarizing as a measure of constructing gist (Armbruster & Anderson 1987; Berkowitz, 1986; Meyer & Poon, 2000). Two other studies link summarizing directly to comprehension processes. Winograd (1984) looked at good and poor eighth-grade readers' ability to summarize exposition and found that not only did good readers understand what it meant to summarize, they were also more capable of representing gist through a summary written in their own words. Brown, Day, and Jones (1984), considered the abilities of fifth, seventh, eleventh graders, and college students to summarize more succinctly as the word limits on the summarization tasks decreased, and found that although younger children could represent gist, as task demands increased, they were less able to summarize concisely and tended to copy the most important information from the text verbatim. Both studies linked summarization to text comprehension. Brown et. al. (1984) suggested that students must possess an understanding of the task demands as well as the text characteristics in order to represent the gist of a text, and that it is the coordination of these cognitive processes that allow a reader to monitor and evaluate interactions with text. Winograd (1984) considered what poor readers did not understand about the task of summarization. He contended that poor readers do not understand the purpose of summarization, failed to identify important information in the text, and failed to use the transformations of text that good readers use to construct gist.

Word Study Instruction. Word study instruction represents another category of reading strategies that children can learn to help with decoding and comprehension (i.e.

Clay & Cazden 1990; Juel & Minden-Cupp, 2000; Nagy et al., 1985; Stanovich, 1989). What is known about beginning literacy skill is that students need to come to an understanding of the alphabetic principle and be able to use it to improve word identification skill (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998). Studies of phonemic awareness principles are also being reported in abundance. Scanlon and Vellutino (1997) discovered that first grade reading success was strongly associated with phonemic awareness skills taught in kindergarten. What remains debatable is whether or not these word identification and decoding skills should be taught in isolation or within the context of reading in connected text.

In this section, I describe two studies of word identification. While it is possible, within an integrated model, to situate word study within a social discourse community, because the context of word study research is generally not social, I report on one clinical and one classroom study to highlight the two ways word study research is often approached. The first is a clinical study of two different word study programs conducted in laboratory classrooms at the Hospital for Sick Children in Toronto, Canada (Lovett, Borden, Lacerenza, Frijters, Steinbach & De Palma, 2000). While the Lovett et al (2000) study is recognizably very clinically controlled, it sheds important light on the process of learning to read words. By contrast, the other study occurred in primary grade public school classrooms and also provides evidence about the process of beginning to read. (Juel & Minden-Cupp, 2000).

The Lovett et al. (2000) study reported on two different programs. The first program, Phonological Analysis and Blending/Direct Instruction Program (PABH/DI), focused solely on phonological blending and letter-sound association skills in order to improve word recognition. The second program under consideration was the Word Identification Strategy Training Program (WIST) that was developed through the Hospital for Sick Children in Toronto (Lovett et al., 2000). The WIST program directly taught students a set of word identification strategies which they can then apply flexibly to their reading. The four strategies taught were a) solving by analogy, b) seeking a part of the word that you know, c) attempting variable vowel pronunciations and d) taking away affixes to determine the root word.

This study is interesting because not only did the researchers compare the two types of word identification programs, they also created two groups of students who received both programs. Students ages 6-13, identified as having severe reading deficits as measured by a battery of standardized tests, were assigned to one of five conditions: 35 hours of PHAB/DI followed followed by 35 hours of WIST (n=15) , 35 hours of WIST followed by 35 hours of PHAB/DI (n=10), 70 hours of PHAB/DI (n=20), 70 hours of WIST (n=18), or 35 hours of self-help skills (CSS) followed by 35 hours of mathematics training (n=22). Teachers conducted classes for one hour per day until a 70 hour criterion was met. Teachers instructed students in small groups with an average teacher student ratio of 1:3.

The researchers discovered that students who had received the combined PHAB/DI - WIST training, regardless of order, demonstrated greater generalized word identification gains than did children in the groups who had received either of these programs alone or the control children. Analyses were conducted using the General Linear Model procedure. Interactions were analyzed using contrasts. However, differences are more easily seen using raw scores. On a Test of Transfer from instructed to uninstructed words, all groups at pre-testing read an average of 15 words. At post-testing, both groups receiving the dual training averaged a mean of 70 words correctly identified, while the groups receiving only PHAB/DI or WIST averaged a mean of 50 words recognized. The control mean for this test was 40 words recognized. On a test of multi-syllabic words, at pre-testing, all groups read an average of 15 words. The groups receiving both treatments averaged 40 words identified while the two groups receiving one or the other word instruction program averaged only 25 words. The control group correctly decoded an average of 15 words. On the Woodcock Reading Mastery Test-Revised non-word reading sub-section, all groups read an average of 8 non-words correctly at pre-testing. At post-testing, the groups receiving the dual training read an average of 18 non words, while the groups receiving one or the other read an average of 13 non-words. The control group only read an average of 9 words.

The results of the study indicated that struggling readers who were exposed to more word attack strategies through the combined program did meaningfully better than students who received either program alone, suggesting that providing struggling readers with a variety of word attack strategies, as opposed to focusing on one form of word attack over another, may have more beneficial learning outcomes (Lovett et al., 2000).

The study reported by Juel and Minden-Cupp (2000) was conducted in four public school classrooms. This study compared the word study and word identification lessons taking place in first grade classrooms. The researchers did not intervene. Each classroom studied had some factors in common as well as some differences. In the first classroom, word recognition instruction occurred as whole-class word wall instruction before students broke into reading groups. Very little phonemic awareness work occurred in classroom 1. In the second classroom, language arts occurred solely in reading groups and focused on word sorts based on rime units, segmenting, and chunking words as appropriate to the needs of the readers in the low, middle and high reading groups. In this second classroom, there was significant teacher modeling. In the third classroom the teacher modeled writing and relied on peer coaching to facilitate word recognition both during a whole class expanded morning message, and in reading group settings. There was no set phonics curriculum in this classroom. The teacher in the fourth classroom was very phonics oriented, and differentiated her instruction across reader needs by reading group. She spent considerably more time in phonics-oriented instruction with the lower readers than she did with the more advanced reading groups. Further, this teacher's instruction changed the most across the school year, as the needs of her readers changed.

The researchers observed and coded data from each teacher established low reading group for one hour each week and from other reading groups at least every two weeks. They also observed whole-class language arts in classrooms 1 and 3 because whole class work was integral to the language arts program. The researchers assessed each child in the four classrooms in September, December and May using the Book Buddies Early Literacy Screening (BBLES) (Johnson, Invernizzi & Juel, 1998). It assesses word recognition (BBLES part 1) as well as ability to read and comprehend passages (BBLES part 2). Children were also assessed using the Wide Range Achiecvement Test (WRAT) in September, December, and May. At the same two data collection points, children were also given lists of five decodable, and five sight words to read.

An analysis of co-variance between children's reading scores on the BBLES part 2 in May indicated a statistically significant difference in reading growth ($F(3,50) = 6.69$, $p < .001$). Bonferonni comparisons using overall classroom means showed that children in Classroom 4 were reading at a late second grade level, children in classroom 3 were reading at a mid-second grade level, children in classroom 2 were reading at a late first grade level and children in classroom 1 were reading at a primer level as measured by the BBLES part 2 (no inferential statistics are reported). However, on the BBLES part 1 and the WRAT, children in all four classrooms had reading scores comparable to an end of first grade level.

A treatment by reading level interaction also occurred. Of the low reading group children, only children in classrooms 2 and 4 were reading near grade level by the end of first grade as measured in the BBLES part 2. Children in classrooms 1 and 3 were not asked to read the end of first grade passages as they became frustrated at the primer level. The researchers also compared word reading means from the WRAT for each low, middle and high reading group. Two findings were important from this analysis. First, the more time low group students spent in reading group, the better they did. Low-group word recognition means on the WRAT for classes 2 and 4 were 16, and 19 respectively, while low group means on the WRAT for classes 1 and 3 were 11 and 6 respectively. Second, classrooms where all children were the most successful had the most differentiated instruction. For example, in classroom 4, instruction in all three reading groups was consistently different across the school year. Low, middle and high group WRAT means for that classroom were 19, 27, and 28, respectively as compared to classroom 1 where word work was less differentiated (Low, M=11, middle, M=19, high, M=33).

At the May data collection point, children across classrooms in the low reading groups did try to apply the strategies taught as they read the sight word lists (SW) and the decodable word lists (DW) and thought aloud about their decoding strategies. Those children in classroom 1 who had not been taught any type of word attack strategies had none to apply (May DW, M=2.1), reflecting a decrease from the pre-test (Dec. DW, M = 2.5). Children in classroom 3 mainly applied visual strategies (DW, M= 2.8). Children in classroom 4 attempted to sound and blend phonemes (DW, M=4.5). Children in classroom 2 used a greater variety of strategies (DW, M = 3.8). Finally, children in the low groups had difficulty seeing chunks in words as evidenced by their inability to identify onset-rime patterns even in classrooms 2 and 4 where these patterns were specifically taught (no data beyond the means reported above is given).

Juel and Minden-Cupp (2000) reported two important implications from their study. The first is that differentiated instruction may be helpful in first grade as evidenced by the growth of all children in classrooms 2 and 4. Second, the *form* of phonics mattered. Teachers in both classroom 2 and classroom 4 taught phonic and phonemic awareness skills, differentiated to meet reader needs. The phonics instruction in the two most successful classrooms also included writing for sounds (Juel & Minden-Cupp, 2000).

Relationships Between Readers and Text

Bakhtin (1986) theorized that the more an individual uses the conventions of a genre, the more freely s/he will be able to use them, and that it is not a person's lack of language that prevents skilled communication within a genre but the person's lack of command of a genre within a given sphere (Bakhtin, 1986). Further, Swales (1990) called for research that helps to explain both genre and rhetoric and its effects on communicative competence.

A Model of Text Processing

Calfee and Chambliss (1987) created a system for understanding and explaining the rhetorical patterns of exposition which can be linked to the theories of both Swales (1990) and Bakhtin (1986). In their 1987 work, they surveyed freshman college composition books looking for commonalities in the rhetoric because these texts constitute the writing curriculum for academic writers. Through their work, they discovered three primary purposes for expository writing: to inform, to argue and to explain. Further, they uncovered rhetorical patterns that were common across the texts surveyed. Drawing upon work in cognitive psychology, the authors then began representing ideas in the texts graphically and matching those graphs to the rhetorical categories they identified (Calfee & Chambliss, 1987). A graph of the seven sub-designs identified by Chambliss & Calfee (1998) can be found in Appendix A.

Swales (1990) theorized that each genre has prototypes used by the discourse community that have specific nomenclature, representing typical classifications. Most communicative events occurring within the genre will exhibit similar characteristics of the prototype. Bakhtin (1986) would also argue that genres existing within an historical moment in time are quite identifiable by the community using them, and are historically stable, particularly secondary genres such as novels and scientific writing. In designing their model Chambliss and Calfee (1998) relied upon patterns codified in college composition books (Calfee & Chambliss, 1987) and familiar in instructional materials. In this way, they were designing a model for identifying the rhetorical patterns in text within a specific sphere of human behavior; that of academic writing for student apprentices (Bakhtin, 1986; Swales, 1990). Because the sphere is limited, according to Bakhtin (1986), complete identification of the genre and the purpose for which the genre evolved is made clear. However, the model itself still allows room for interpretation as genres evolve (Swales, 1990).

The Chambliss and Calfee model (1998) has been used in research to explain text processing within the sphere of textbook learning (Chambliss, 1995; Chambliss and Murphy 2001; Chou-Hare, Rabinowitx & Schiebele, 1989). Swales (1990) also recommended pedagogical tasks that assist students in developing their communicative competence within a genre. The Chambliss and Calfee (1998) model for analyzing patterns in text seems pedagogically useful. It comes very close to allowing for exact representation of the types of expository textbook structures students actually find in their classrooms because text can be graphically depicted in the manner in which it was *written* (Chambliss & Calfee, 1998).

In their 1987 work, Calfee and Chambliss described how a text would be analyzed according to their taxonomy. The first step was to identify the text's primary genre and structure. Often, key words as well as functional devices provided clues as to the overall structure. Skimming the text to determine if initial conjectures were correct was also crucial to this process. Second, the same approach must be applied to smaller sub-sections of the text because each section or paragraph may be represented in a manner different from the global structure of the text (Calfee & Chambliss, 1987).

In their more recent work, Chambliss and Calfee (1998) included as a first step a determination of the author's purpose for writing the text, because description, argument, and explanation are typically represented using a sub-set of the seven possible patterns they identified (Chambliss & Calfee, 1998). Once the author's purpose has been identified, the analyst can then use the features of the text to determine an overall global structure, and use the taxonomy to represent that structure. The same procedure can then be applied to smaller sections of text (Chambliss & Calfee, 1998). Chambliss (1995) and Chambliss and Murphy (2000) used graphic depictions resulting from text analysis in their studies of text processing.

Chou-Hare, Rabinowitz and Schiebele (1989) used the patterns described by Chambliss and Calfee (1998) to determine the effects four different structures might have on fourth- (n=75) sixth- (n=76) and eleventh graders (n=107). Short texts, called "building blocks" were topical nets, linear strings, matrices and falling dominoes. Each of the four patterns was also represented in the form of argument in this study.

The researchers constructed two forms of text for each grade level. One form was on grade level and one form was a third-grade leveled text. Each of the four patterns was also represented in the form of argument in this study. Half of the passages directly stated the main idea, half did not. Each student read two randomly assigned passages, one on grade level and one at the third grade level. The researchers administered the passages in a counterbalanced order. After reading the passages, children underlined the main idea.

To analyze the data, the researchers used a 3x4x2 factorial ANOVA, with grade as the between subjects factor. Text structure and main idea (explicit or implicit) were within subjects factors. The level of text (third-grade or grade-appropriate) was nested. On the grade appropriate texts, there was a main effect for explicitness of the main idea ($F(1,255) = 987.59$, $p < .001$). Similar results on the third-grade texts indicated that if the main idea was clearly stated, as in the argument structures, students across grade levels fared much better than when they had to infer a main idea ($F(1,255) = 1,610.43$, $p<.001$). Interaction effects indicated that the eleventh-grade students out-performed both the sixth grade and the fourth grade students when the main idea was implicit ($F(2,255) =9.48$, $p <.001$). Further, an interaction between text structure and grade was found ($F(6, 765= 2.67$, $p<.02$). Scheffe post-hoc tests revealed that on the comparison/contrast passages grade 11 students were more able to identify main ideas that grade 6 students, who were more able that grade 4 students. For topical nets and sequence, grades 6 and 11 out-performed grade 4. However, there was little difference between grades 6 and 11 concerning performance on these two structures. On the cause/effect passage, there were no statistically significant effects.

Looking specifically at the four building block texts, children understood topical nets the best. Chambliss and Murphy (2002) found a similar result. Chou et al.(1989) found that children understood the remaining structures in this order: linear string, matrix and falling dominoes. Performance with matrix and falling dominoes was poor, with none of the students identifying any of the main ideas (Chou et al, 1989). Chambliss and Calfee (1998) posited that this difference may have occurred because the students were less familiar with compare and contrast and cause and effect linkages.

Readers Processing Text

There is significant research contrasting the cognitive strategies that good and poor readers do and do not use to comprehend text. Reading is viewed as a multidimensional activity during which readers bring schemas, or prior knowledge (Swales, 1990), and inferencing (Anderson & Pearson, 1984) to the task of comprehension. Reading strategically also requires that good readers monitor and evaluate their own comprehension (Bakhtin, 1986; Paris, Lipson & Wixson, 1983). Pressley and Afflerbach (1995) found that good readers continuously update their understanding of text as they read, are aware of and correct confusions, and make inferences, linkages and summaries. In short, good readers are actively involved in the cognitive process of constructing meaning from text (i.e. Brown, Day & Jones, 1982; Meyer, Brandt & Bluth, 1990; Winograd, 1984). Strategic processing is directly linked to the work of Bakhtin (1986), Swales, (1990), Gallimore and Tharp, (1990) and Vygotsky, (1978) because, as learners are engaged in literacy development through the learning and use of cognitive strategies, they are also engaged in creating a representation of text within a given discourse community. They combine their knowledge of text and their knowledge of task with what they find in the text to construct meaning (Kintsch, 1998; Swales, 1990) by responding to the text within a socially constructed discourse community (Bakhtin, 1986; Swales, 1990)

By contrast, research has shown that poor comprehenders tend to lack the strategies that lead to these higher-order cognitive processing skills, as well as knowledge of these strategies (i.e., Schumaker, Deshler, Alley, Warner, & Denton, 1984). Myers and Paris (1981) compared good and poor readers who were matched on age, sex and math achievement, and found that the good readers knew more about strategies, detected more errors and had better text recall than did the poorer readers. Garner (1978) found that older and better readers were more aware of and more likely to engage in strategic reading. Further, children receiving strategy training showed enhanced awareness and reading skill.

A 1980 study by Meyer, Brandt, and Bluth highlighted how good and poor readers processed text. Using Meyer's (1985) model for prose analysis, the authors studied 9th grade readers' abilities to a use top-level structure strategy for comprehension and text recall (N= 121). One-hundred-two ninth-graders were randomly assigned to read two of four well-structured passages written by the authors. One passage was a problem/solution passage on supertankers and the other was a comparison passage on dehydration. Each passage had two forms, a signaled and unsignaled form. The signaled forms of the passages explicitly stated in the text the type of top-level structure the author used. The readers were categorized into three groups: high, average, and low comprehenders based on the Stanford Achievement Test. Each reader was asked to write a written summary of each passage immediately after reading it, and again one week later. The authors hypothesized that good readers would use a structure strategy, defined by the authors as an organized strategy through which readers search for a logical relationship in the text that can subsume the majority of the text. Further, they assumed that poor readers would defer to a listing strategy to simply recall data from the text in an unorganized fashion.

This study presents many important findings. I report here the ones related to use of top-level structure strategy. Only 22% of the ninth grade students used structure strategy consistently and only 50% used it at all. However, as the authors hypothesized, students identified as good readers did use the structure strategy to organize immediate ($x^2 = 12.65$, $p < .002$) as well as delayed ($x^2 = 30.32$, $p < .01$) recalls. Average and poor readers resorted to a listing strategy across 99% of both the immediate and delayed recalls. Finally, the use of structure strategy appeared to assist good readers in recalling more information from the text. There was a significant effect for training condition on the immediate recall post-test ($F(2,109) = 6.22$, $p < .003$). Mean total recall scores on the supertankers passage for the good, average and poor readers from the immediate recall data point were 60.0, 49.7, and 41.8, respectively. Signalled versus non-signalled passages did not appear to have a lasting effect across time for any group. This study indicated that good readers expected to find and were able to use the global structure used by the author. They organized and consequently comprehended and recalled textual information based on an organized strategy for recognizing top-level structures in text. Poor readers, in contrast, tried to recall the text as a list of unrelated details.

While some studies indicate that young children lack text processing abilities (i.e. Kucan & Beck, 1996; Williams, Taylor & Gagner, 1981), other research indicates that even young children have some fundamental knowledge of text structure (i.e. Duke & Kays, 1998; Chambliss & Murphy, 2000).

Duke and Kays (1998) found that even kindergarten children were able to discern and use the linguistic patterns of expository text in their pretend readings. Duke and Kays (1998) studied children's pretend readings of an information book. To do so, they chose a text about firefighters which contained familiar content and format based features such as an index and glossary. The text was one that the researchers believed students would not have seen or heard before. They also contrasted the information book reading with a narrative pretend reading. The researchers had children pretend-read both narrative and expository in September and in December. During the time in between, the 20 children in the kindergarten class were exposed to information book read-alouds three to four times per week. However, the features of the texts were not studied. The researchers analyzed the children's audio taped pretend readings using intonation units indicated by a pause where a comma or period would be indicated in written language. Transcripts of the pretend information book readings were coded for the children's usage of linguistic features commonly found in information books.

The September pretend readings were then compared to the December pretend readings in a number of areas. Duke and Kays (1998) found that in September, children's usage of timeless verbs was 16.68%, whereas in December it increased to 35.98% *(*Non-Parametric Wilcoxin Signed Rank Test, $p = .025$) Children's use of generic nouns increased from 10.88% to 28.48% ($p = .018$). Their analysis of children's' connections to topical theme indicated only slight increases that did not reach statistical significance. An analysis of usage of beginnings and endings indicated that children did not use these features at either data collection point, and an increase of the use of technical vocabulary was seen with only two children.

However, in their analysis of classificatory structures, children used twice as many in December, with seven children using these structures a total of 15 times, as opposed to September, when four children used these structures six times. When the narrative pretend-readings were coded, the researchers found few instances of children using the linguistic features of information books. Because the children were able to infer these linguistic features without direct classroom instruction, the authors suggested that young children are able to acquire linguistic features of expository text. However, they also noted that an analysis of the September information book pretend reading showed some minimal prior knowledge for these features.

Using the Chambliss & Calfee (1998) taxonomy, Chambliss and Murphy (2000) looked at fourth (n=37) and fifth graders' (n=27) abilities to represent argument structures. The researchers used three texts about Maryland, the children's state. Each of the three passages came from a fourth grade text the students were not using. Each text had a global argument structure. However, passages within the original texts were organized as topical nets. The researchers re-wrote each of the three texts to represent the content using an argument structure (Chambliss, 1995; Chambliss & Calfee, 1998; Toulmin, 1958).

Twenty-two students read the passage about Maryland's state house, 22 read about cultural variations in the state, and 21 read a passage about sports in Maryland. Children then answered two questions. In the first, they indicated the main idea for the passage. In the second, they listed as many supporting details as they could remember. The researchers diagramed the children's responses according to an argument or topical net pattern, depending on how closely the claim and warrants the children gave matched the hierarchical structure of the text. Children's graphs were compared to template graphs for each passage created by the authors. Children received a score of 1 for each instance of data they represented. Results were analyzed using a 2(grade) x (3 passage type) x 5 (instances of data) mixed ANOVA with grade and text as between subjects factors, and data as the within subjects factor. Fifth graders listed more instances of data than did fourth graders ($F(1,59)=7.78$, $p<.01$). The researchers also found an interaction for data and text ($F(8,236)=5.80$, $p<.001$). Children who read the text about sports recalled the most data while children who read text about the state house recalled the least. Across passages, high instances of data occurred when details were vivid and familiar to children, while data that was less familiar or vivid was recalled less.

The researchers also conduced a chi-square test ($x^2(4, 65)=30.31$, $p.< .01$) to determine what types of structures the children represented in their recalls. Across grades, .68 of the children represented some type of structure. Overall, most students used a structure to represent text. However, they were as likely to represent them as topical nets as they were to represent them as arguments (Chambliss & Murphy, 2002). The researchers also found differences across grade level. Fifth graders were more likely to represent the text as an argument structure while fourth graders were more likely to represent the text as a topical net ($x^2(1,23) = 7.35$, $p<.01$). This difference may point to a developmental difference in children's ability to represent text, and echoes the work of Chou-Hare et al. (1989) who found that 6th and 11th graders were more proficient at representing structures other than topical nets in their recalls. Both studies support the idea of children's developmental abilities to use concrete examples in their development of abstract models (Gallimore & Tharp, 1990; Vygotsky, 1978).

It is safe to assume then, that instruction in rhetorical patterns could improve students' textual knowledge (Swales, 1990) thereby aiding the comprehension process. This might be particularly true for adolescent struggling readers. Because even younger children had some rudimentary knowledge of text processing (Chambliss & Murphy, 2001; Duke & Kays, 1998), and because high school students who were good readers seemed more adept and recognizing and using structure in text (Chou et. al. 1989; Meyer, Brandt & Bluth, 1980, Brown, Day & Jones, 1984), it seems logical to assume that adolescent struggling readers might fall somewhere in the middle of this continuum.

Elements of Supportive Text

If what students' have to learn to read in high school is typically expository in nature and represents complex comprehension issues, then asking struggling adolescent readers to read narrative early intervention texts makes little logical sense. Along with the fact such texts provide no comprehension challenges, it is also not the type of text that secondary students need to learn to negotiate. In this section I discuss four elements of text that research indicates might be beneficial in assisting older struggling readers. First, text must possess appropriate links to background knowledge and interest (Chambliss & Calfee, 1998; Swales, 1990), second, it must have significant density of ideas (Chall, Bissex, Conrad & Harris-Sharples, 1996) to allow for comprehension instruction, third it must have clear rhetorical patterns (Meyer & Poon, 2001) and clear signaling devices (Lorch, Pugzles & Inman, 1993). Each of these elements when learned and practiced can be seen as supportive of Swale's (1990) schema theory for text processing. Knowledge of each of the four elements would begin as textual knowledge, learned and practiced in relation to a specific text, but, over time, would become part of formalized text schemata. Once students began to create a formalized text schemata, I hypothesized that they would be able to use their new knowledge to support their own textual learning independently of the teacher.

Links to interest and background knowledge. The National Reading Panel (2000) defines prior knowledge as “knowledge that stems from previous experience” (p. 4-83). In order for the integration process to occur, children have to activate their prior knowledge of a given subject prior to reading. Numerous research studies support the ideas that both interest and background knowledge are integral parts of the comprehension process (Alexander & Jetton, 2000; Baker, Dreher, & Guthrie, eds. 2000; Block & Pressley, eds., 2002; Chambliss & Calfee, 1998; Swales, 1990; Swan, 2003). An area where future research is needed is how background knowledge and interest interface (Alexander & Jetton, 2000). Because few studies address this interaction, I present them together as within-child factors that can affect comprehension. Use of books that link text to prior knowledge can be supported by the theories of Swales (1990) because the reader is assimilating new information into his or her existing text schemata. Specifically, with the use of appropriate text, students would be linking prior knowledge to their growing schemata to construct an abstract model that aids in text processing (Swales, 1990; Vygotsky, 1978).

A study by Schneider, Korkel, and Weinert (1989) considered the effects that expert and novice understandings of a subject had on comprehension. In their study, they identified topic experts who were of low- and high- verbal aptitude and of topic novices who were of low and high verbal aptitude. Verbal aptitude was measured using the vocabulary, sentence completion and word classification sub-sections of a German cognitive ability test. The text the fifth and seventh graders were given to read was about soccer. Their two closely related studies revealed many things. First, they found no differences in the background knowledge base of the low versus high verbal aptitude soccer experts. They also found that the low and high verbal aptitude experts were equivalent in their memory for text detail and that both topic expert groups, regardless of reading ability, did better at recalling text detail than did either of the high-verbal or low-verbal novice groups. The results point to the significant role that background knowledge played because on all measures, topic experts did better than topic novices regardless of age or verbal aptitude. A multiple regression showed that only 1% to 3% of the variance on dependent measures was due to aptitude and anywhere from 25% to 45% of the variance could be accounted for by domain specific knowledge (Schneider, et al, 1989).

Sufficient density of ideas. The second element the text must possess in order for it to be a mediating tool for learning, is conceptual information with enough density of ideas to allow for higher-level comprehension instruction. As Swales (1990) and Bakhtin (1986) point out, the structure and content of text are inherently linked in a recursive manner. Content and purpose for content drives structure, but structure also provides the norms for presenting particular content.

A number of studies point to the use of exposition to increase cognitive challenges. Paris and his colleagues (1986) designed a strategic reading program for elementary school children. They taught children to stimulate their awareness of procedural, declarative and conditional knowledge. They also assisted students in learning how to evaluate and plan their learning. Release of responsibility (Vygotsky 1934/2000) was built into the program through modeling, guided practice and independent strategy practice. When lessons were coded for each type of strategy taught, results indicated that there were significant correlations between comprehension and reading awareness for both third graders ($r (89) = .28, p < .01$), and fifth graders, ($r (90)$

=.40, p< .001) (Cross & Paris, 1988). In similar work with kindergarten children and read alouds, the researchers found that young children were able to engage in the use of strategies to assist comprehension (Paris, Saarino & Cross, 1986; Paris, Cross & Lipson, 1984; Paris, Lipson & Wixson, 1983). In another study, Oyler and Barry (1996) found that children listening to information books appeared to be actively engaged in integrating new information into their existing knowledge of the world.

In their qualitative study of information book read alouds, Smolkin and Donovan (2001) hypothesized that, as the teacher and students engaged in the information book, they would be "more overtly engaged in meaning-seeking, meaning making efforts" (p. 104). To study their hypothesis, they followed a first grade teacher for two years, audio taping her read-aloud sessions using expository text. The researchers stated that the teacher in the study had very little knowledge of comprehension strategies, and therefore, no intention to teach them. She simply added the use of information books during whole class read-alouds. Their analysis of the information book read aloud showed that content knowledge and vocabulary were interdependent, and that the teacher was able to point the children toward using cognitive processing strategies for dealing with text. They also found that the teacher often reminded the children that needed pieces of information could be found in the text (Smolkin & Donovan, 2001).

The researchers then coded the information book read-alouds for three distinct types of comprehension strategy instruction. Sub-categories in the coding for establishment of links within text included links within and between sentences, summarizing strategies, and examination of text structure for overall organization. Sub-categories within establishing links to prior knowledge included creating mental imagery and analogy, refuting incorrect prior knowledge, and generating hypotheses through the use of text and prior knowledge. The third category was based on student development of an awareness of author's decisions and readers' thinking. Sub-categories included Questioning the Author (Beck, McKeowan, Worthy & Kucan 1996), and using fix-up strategies as a comprehension monitoring technique. In their discussion of coding categories, Smolkin and Donovan (2001) found that the informational texts used afforded multiple opportunities for "comprehension related discussion" (p. 1140). The researchers also pointed out that narrative and expository text read-alouds resulted in different discourse patterns. Smolkin and Donovan (2001) hypothesized that these patterns are linked to the different purposes for narrative and expository text. The narrative genre of the storybook is meant to entertain and so the children and teacher become involved in the story and the read-aloud is much more of an aesthetic experience. The information book is meant to inform, and produces much more text-related talk and creates links to prior experience that help the child to understand the content of the text (Smolkin & Donovan 2001).

Clear rhetorical patterns. In their qualitative study of think-alouds, Afflerbach and Van Sledright (2001) found that students had difficulty shifting between the different types of texts appearing in their textbooks. For example, students found it challenging to go from reading excerpts from a Jamestown diary back to the text in the body of the chapter. I posited that allowing struggling adolescent readers to use low-level, well organized interesting text would allow them to make better use of both their background and their developing genre knowledge (Swales, 1990) than they could if they were placed in text that was initially structurally confusing. In this way, I conjectured that it might be possible for text with appropriate features to become a cultural tool for learning (Vygotsky 1939/2000), whereby students could actually begin to develop strategies that would allow them to use the text, as opposed to the teacher, for independent learning and comprehension. In my study, I considered this textually assisted performance.

For exposition to be textually supportive, I hypothesized that the text must possess coherent rhetorical patterns. Aligning with Swales (1990), Meyerand Poon (2001) hypothesized that one of the types of knowledge students must possess about text in order to comprehend it better is an understanding of the type of rhetorical pattern chosen by the author to represent ideas. There is significant support for linking the knowledge of text structure to comprehension. NAEP data from the years 1980 and 1981 indicate that not only do middle grade students have difficulty reading expository text; they also have difficulty identifying text structure. If readers lack an avenue for processing the structure of text to aid in their comprehension, they most often resort to a simple and incomplete listing of details recalled (Meyer & Poon, 2001).

Studies reported earlier in this chapter support the use of direct instruction in rhetorical patterns to assist students with recall of text (i.e. Armbruster & Anderson, 1980; Berkowitz, 1986; Bartlett, 1978; Meyer & Poon; Taylor & Beach 1984).

Another study supporting main idea instruction was conducted by Taylor (1985). In her study, sixth-grade students were given five one-hour reading lessons. During the lessons, students in two intervention groups (A and B) were shown how to summarize main ideas and supporting details using and outline, and how to write a main idea using excerpts from their social studies textbook. These activities were first modeled by the teacher, and as students became more adept, responsibility for the tasks was gradually released to the students. Students in the comparison groups (C and D) read the same text and answered main idea and detail practice questions. A significant difference in total recall scores between the two conditions was found for both of the intervention groups ($F(3, 89) = 4.34$, $p = <.01$). Taylor (1985) suggested that students who had specific training were able to include more main ideas. The study also included five sessions during which intervention groups were trained to write compare and contrast or cause and effect summaries. The writing instruction did not reveal any significant differences among groups in their abilities to represent summaries of texts in writing.

Chambliss and Murphy (2002) found that fifth graders were more likely to be able to represent the argument structure with a claim and subordinate facts than were fourth graders. The authors also discovered that a popular method used by children to create a schema for the argument text was through the use of a topical net. The authors presented two suppositions. First, that the ability to identify hierarchical structures in text may well be developmental. This is supported by the work of other researchers (Brown, et al, 1983; Winograd, 1984). Further, because the use of a topical net was so prevalent, the authors concluded that this may be because much of the expository writing found in school textbooks is arranged around a topic.

If a claim or warrant can be made, then the text may very likely possess an argument structure. Argument structure need not be about persuasion. If a paragraph possesses a main idea, then the main idea may be seen as the claim, under which other supporting details can be subsumed. In fact, Chambliss and Murphy (2002), hypothesized that argument structure with clear main ideas may be excellent text to use with less capable readers.

Clear signaling devices. Instruction in identifying rhetorical patterns and main ideas is not necessarily the same as teaching students to use signaling devices. Signals are devices used by the author in an attempt to direct the reader toward important information without altering the body of the text. Such devices can include headings, overviews and summaries. Lorch, Pugzles, and Inman (1993) suggested that such devices can either help or hinder the reader, and that “effective signals must lead to the construction of a more complete and coherent topic structure” (p. 281). In a study of ninth-graders ability to represent overall text structures using signaling devices, Meyer, Brandt and Bluth (1980) found that, for students whose reading comprehension test scores were lower than their vocabulary scores, signals in text allowed these students to switch from a list representation to a structure representation.

Lorch et al. (1993) presented undergraduate students with signaled and unsignaled problem/solution text about energy. The signaled text included four specific signals: blank lines between sections and sub-sections, overviews of upcoming topics, summaries at the mid-point and the end of the text, and underlined headings and sub-headings. The unsignaled text was the same text, but was written in the typical prose style found in many textbooks. The researchers found that students reading the signaled text recalled more of the topics in the text than did the students reading the unsignaled text (F (1,194) = 67.0, p <.05) Results also indicated that the signals in the text assisted readers with the organization of their recalls (F (1,192) =13.50, p < .05).

Reading Performance in the Discourse Community

In this study, socially assisted performance (Gallimore & Tharp, 1990; Vygotsky, 1978) within a discourse community for the purpose of gaining communicative competence within a genre (Chapman, 1999; Bakhtin, 1986; Swales, 1990) worked through two channels. First, the role of the expert (Swales, 1990) was crucial in creating an altered environment (Brown, 1992) and in providing assisted performance (Gallimore & Tharp, 1990). Second, the tasks, or goals, that the expert (teacher) provided were also important, because students must be provided with attainable goals, or tasks as avenues for learning (i.e. Swales, 1990; Guthrie, 2000). I hypothesized that it was the reciprocal linkages created between teacher, task, and students that allowed for engagement within the discourse community (Chapman, 1999; Tharp & Gallimore, 1990; Palinscar & Brown, 1984; Swales, 1990; Wigfield & Guthrie, 1997).

What was crucial in the implementation of this framework was that the knowledgeable other acted within the student's optimal level of challenge (Morris 1999), knowing when to provide more and less assistance, and when to begin to transfer responsibility of the learning situation to the student (Moll, 1990; Vygotsky, 1934/2000). This was true for all three phases of task in my framework. It is difficult to separate comprehension, word study, and text as instructional elements in an interactive model. For clarity in my discussions, I did so. Assisted performance through cognitive strategy instruction within the student's optimal level of decoding and comprehension challenge operating within a purposeful discourse community brings them back together. As the expert, I had to be aware of how these elements were interacting for a particular child, make instructional decisions about when to provide more or less assistance, and when to begin encouraging the student in the process of becoming more independent. As the expert within the discourse community, I also chose texts that possessed the four key elements I hypothesized would allow for textually assisted performance, and made judgments about when students were ready to engage in more independent learning from text.

I conjectured that it was only when these three pieces; comprehension, word study and text, came together at the point where students could use them interdependently to increase literacy skill through support provided by the teacher, the task, and the text, or a combination of all three, that struggling adolescent readers would be able to construct meaning from text by using cognitive strategies that allowed them to actively engage in increasing their own literacy abilities. I further hypothesized that this increase in literacy ability, through the channels mentioned above, would lead students to become more intrinsically motivated to read because their self-efficacy beliefs would continue to increase as their literacy skill increased.

The Role of the Expert

Comprehension, text, and word study go hand in hand. In my framework, they were interdependent. Appropriate instruction across all three were also dependent on the discourse community into which students were invited (Chapman, 1999). The role of the teacher was critical in creating a risk-free environment where a discourse community began to take shape and through which students became empowered to learn (Chapman, 1999; Vygotsky, 1978). Wigfield, Guthrie & Von Secker (2000) theorized that when students perceive their teacher as providing clear goals and the means through which those goals can be attained, that this competence support can increase intrinsic motivation. I hypothesized that one of the ways student's intrinsic motivation could be increased within the discourse community was through providing a comfortable environment where risk-taking, open discussion, and question asking were not only supported, but celebrated. By providing assisted performance through the six means outlined by Gallimore and Tharp (1990), students would come to understand that their learning abilities were being supported by the expert (Chapman, 1999; Swales, 1990).

One primary study contributing to competence support theory is Skinner, Wellborn and Connell's (1990) study on learning contingencies. They studied students' capacity beliefs, control beliefs, and strategy beliefs, and analyzed children's perceptions of teacher behaviors. They wanted to know if children felt their teachers were providing clear expectations and feedback (contingency). They also looked at whether or not the children perceived their teachers to be taking a positive interest in them (involvement). The study examined the possibility of a direct relation between children's beliefs and how successful they were at cognitive tasks.

Participants in the study were 200 children ages 9-12. All assessments given by the researchers were completed in the same day. Children's strategy beliefs were measured using a 25 item questionnaire designed on a four-point scale in which children assessed five potential causes of their success or failure. Capacity beliefs were also measured using 20 questions on a four-point scale, and assessed the extent to which the children believed they could complete the stated tasks. Control beliefs were assessed using five items that asked the children to indicate the extent to which they were able to produce positive or negative outcomes in school. Student engagement was measured using teacher ratings on a ten item scale. To assess perceived teacher context, children rated their teachers on a four point scale containing nine items. Children's end of the year grades, Stanford Achievement Test scores, and the Rochester Assessment Package for Schools were also used but were not administered by the researchers.

Results indicated that students perceived effort was the most important strategy for influencing school performance ($t = 23.90$, $p < .0001$). Ability was the second most important belief ($t = 14.62$, $p < .0001$). Measures also indicated that children believed effort to be within their control, while powerful others and luck were outside their realm of control. Teacher reports of student engagement were correlated with student reports of control and strategy beliefs. The result of particular interest here is the correlation between perceived teacher contingency and involvement and student perceived control. As predicted, in a path analysis, teacher behavior loaded highly on to positive perceived control ($r = .52$, $p<.001$), indicating a positive correlation between positive student beliefs and teacher behavior, and negative perceived control ($r = -.38$, $p <. 001$), indicating a negative correlation between negative student beliefs and teacher behavior. The other statistic of interest to the researchers because of the direct relationship, was the finding that student engagement loaded onto grades and achievement at a statistically significant level ($r = .31$, $p<.001$). This study is important because it links the teacher directly to students' beliefs about their own success, and was one of the notions used by Wigfield and Guthrie (1997) in their theory of competence support. Wigfield and his colleagues believed that the teacher context measured in this study could be seen as competence support because teacher behaviors empowered students to believe that they were gaining knowledge, skills, and competencies. (Wigfield et al., 2000). What this study makes clear is that student beliefs about teacher practices such as those outlined by Gallimore and

Tharp (1990) were directly related to the amount of intrinsic motivation students felt for reading.

The Role of Task

In the discourse community established for adolescent struggling readers, students' perceptions of their teacher's ability to support their learning is directly connected to the tasks (Swales, 1990) or goals (Guthrie, 2000) the teacher is providing. Those goals must be attainable and understood by the students. When appropriate goals are in place, students begin to see progress in their learning (Swales, 1990; Wigfield et. al., 2000). I hypothesized that, when students began making progress in literacy attainment through clear, task-oriented instruction based on the principles outlined in my instructional framework, that their intrinsic motivation for reading would increase.

Wigfield, Wilde, Baker, Fernandez-Fein and Scher (1996) examined how children's reading motivations related to their reading performance. The students in the study were fifth and sixth graders from six schools participating in the Junior Great Books (JGB) curriculum, a school wide project to enhance achievement. Children's motivation was assessed using the Motivation for Reading questionnaire (MRQ), designed to assess 11 different aspects of reading motivation. The 11 scales include: Reading Efficacy, Reading Challenge, Reading Curiosity, Aesthetic Enjoyment of Reading, Importance of Reading, Compliance, Reading Recognition, Reading for Grades, Social Reasons for Reading, and Reading Work Avoidance. Students took the vocabulary and comprehension sub-tests of the Gates-McGinitie Reading Test in the fall and spring of the project year. They also completed a measure designed to assess higher-order reading and thinking skills. The measure was specifically designed for the JGB project.

The test included four short stories, each with one interpretive and one evaluative open-ended question. All measures were given in the fall and spring of the JBG project year. Results indicated that the motivation scales accounted for between 6% and 13% of the total variance in the various performance measures. The combined recognition-efficacy factor was the most consistent positive predictor of scores on the Gates-McGinitie and the performance assessment. Also of import was the finding that work avoidance and social reasons for reading were the best negative predictors on the Gates-Mcginitie and the performance assessment.

Guthrie (2001) examined student engagement through a classroom case study. He observed a teacher trained in Concept Oriented Reading Instruction (CORI) as she engaged her students in the dissection of owl pellets and then linked the activity to informational text. Guthrie (2001) found a number of principles that supported motivation and engagement in reading. One of these principles was that classroom goals were oriented toward knowledge acquisition. He found that strategy learning occurred through these knowledge goals in science or social studies because they were directly linked to situational interest in a topic. Another important principle was providing autonomy support. Guthrie found that if students had reasonable choices, they became invested in learning and used their investment to support academic achievement (Ng, Guthrie, Van Meter, McCann, & Alao, 1998). Other principles included the use of diverse and interesting text, and empowering students with cognitive strategies. The latter is important because students cannot become motivated to engage in an activity for which they possess no skill. This study is relevant because it links to the idea of competence support through a number of channels: interest, strategy learning, text, and autonomy (Guthrie, 2001).

Research Questions and Hypotheses

Using the framework of challenging task in appropriate text within a discourse community, I wanted to answer three separate questions. First, I wanted to know whether the framework would indicate improvement in overall literacy growth. Second, I wanted to know whether direct instruction in text structure would affect students' literacy abilities. Finally, I wanted to know if the program would have any effects on students' intrinsic motivation for reading. I have outlined the remainder of this dissertation to correspond to these three hypotheses. Each has a separate title: *Investigation Literacy Growth* was designed to discover whether or not the framework of cognitive challenge in appropriate text would increase students' literacy growth. *Investigation: Text Structure,* was designed to directly examine the effects of text structure instruction on students' abilities to comprehend and negotiate exposition. *Investigation: Motivation* was designed to determine whether the teacher-directed framework of challenging task in appropriate text had any effect upon students' intrinsic motivation for reading.

Research question and hypotheses for Investigation: Literacy Growth

For this investigation, my research question was: What is the effect of using the instructional framework of challenging task in appropriate text on students' literacy growth over time? To answer this question, I compared the 22 ninth-grade students who received the intervention to 18 ninth-grade students with similar reading levels who had not received the intervention.

I hypothesized that my framework, which combined word study and comprehension strategy instruction and built on students' current cognitive skill, delivered at the students' optimal level of challenge, would contribute to accelerated literacy growth over time. I further assumed that this type of instruction would lead to more accelerated literacy growth for students in the intervention group as compared to students who did not receive instruction. Finally, I hypothesized that when optimal learning conditions were met, the instructional intervention would be equally effective across gender and school services.

Research Questions and Hypotheses for Investigation: Text Structure

For this investigation, I formed two separate research questions: (1) What is effect does direct instruction in text structure have on students' ability to use the rhetorical patterns in text as a text negotiation and comprehension strategy? And, (2) What is the effect of text structure instruction as compared to personal response journaling on students' ability to use the rhetorical patterns in text as a text negotiation and comprehension strategy? To investigate the first question, retellings from an informal reading inventory were taken before and after the instructional time frame from both students who had and had not received instruction. I hypothesized that students receiving the instruction would be better able to utilize their new knowledge of text structure to create retellings of text than their peers who had not received the instruction.

To investigate the second question, I utilized a within groups counterbalanced design to determine the effects of text structure as compared to personal response journaling. For the instructional period of 18 weeks, students in both the text structure and journaling groups were asked to summarize a text they had recently read. Students all engaged in 9 weeks of text structure instruction and in 9 weeks of personal response journaling. I hypothesized that students who were receiving the text structure instruction would be better able to use their knowledge of text patterns to create summaries than would their peers who were part of the journaling group. Finally, I assumed that the text structure instruction would be equally effective across gender and school services.

Research question and hypotheses for Investigation: Motivation

This investigation had only one research question: How does the model of challenging task in appropriate text affect change in the intrinsic motivation of adolescent struggling readers? To address this question, I utilized a motivation for reading questionnaire. Students in the instruction group only were given this questionnaire before and after they had received instruction.

I hypothesized that the instruction, which allowed students to build self-efficacy beliefs through competence support given by me as the teacher, would assist students in increasing their intrinsic motivation for learning to read. Again, I assumed that the instruction would be equally effective in increasing intrinsic motivation across gender and school services.

Context of this Study

I hypothesized five things about socially assisted performance within the discourse communities designed for adolescent struggling readers. First, that it was at the point when task and text were working in tandem to provide both social and textual learning experiences, that a discourse community where students could gain both basic literacy skill and knowledge of schooled discourse would begin to take shape. Second, that when this happened, learners would build formal schemata for text and be able to use it in combination with prior content knowledge. Third, assisting students to function within an optimal level of learning (Morris, 1999) for both word learning and comprehension instruction at the student's cognitive level would empower students to make higher-level elaborations about the text through personal construction of an abstract model for understanding text (Chambliss & Calfee, 1999; Vygotsky, 1978). Fourth, once features of the text had become part of textual memory (Swales, 1990), students could then use the text itself as a learning tool independent of the teacher. And, finally, that when text and task were working together to provide an avenue for learning (Swales 1990), students would become empowered to engage in the high school discourse community as well as to understand how powerful a tool this empowerment through literacy can be (Bruner, 1991) , which would increase their intrinsic motivation for learning (Guthrie, 2000; Chapman, 1990; Swales, 1990; Wigfield et. al. 2000)

The use of tasks that challenged the learner cognitively (Gallimore & Tharp, 1990) but simultaneously focused on beginning reading skill (Clay & Cazden, 1990) necessitated the use of appropriate text. I defined appropriate text as text that is interesting to the student, but that also allows for cognitive elaborations that transcend the text itself (Chambliss and Calfee, 1998) through, interest and background knowledge, concept density, signaling devices and rhetorical patterns.

If instruction and text were working in tandem to create a learning environment with the appropriate level of cognitive challenge (Morris, 1999), then text and instruction could both act as avenues for learning and could reciprocally compliment each other. Simply put, the text was able to mediate learning through higher quality instruction, and instruction was able to mediate the negotiation of text for students through attending to the students' literacy learning needs.

There is both theory and research supporting the establishment of discourse communities (i.e., Bakhtin, 1906; Chapman, 1999; Brown, 1992; Palinscar & Brown, 1984; Swales, 1990). There is also research supporting each of the three phases of my framework: rereading (i.e. Nagy et al.,1985; Roman et al., 1993; Wong et al., 1994), comprehension and word study instruction (i.e. Juel & Minden-Cupp, 2000; Lovitt, et al., 2000; Meyer & Poon, 2002; Palinscar & Brown, 1984; Vaughn et al., 2000) and for assisted performance and competence support within that framework (i.e., Gallimore & Tharp, 1990; Palinscar & Brown, 1984; Wigfield et al., 1996). Finally, there is a body of research that supports the positive effects of instruction in text structure (i.e., Armbruster & Anderson,1987; Berkowitz, 1986; Meyer & Poon, 2000).

However, these elements have not previously been integrated and studied together in an altered environment (discourse community) that might help adolescent struggling readers to attain communicative competence (Swales, 1990). The purpose of my study was to cut across both theory and research, bringing together elements of best practice in literacy instruction, to design and implement an instructional paradigm that would directly study the effects of an integrated model of literacy acceleration for adolescent struggling readers within a discourse community. Chapter 3 describes the research methods used to study the process of becoming literate within a discourse community.

Chapter 3

Methods

Three research questions guided this study.

1. What is the effect of using an instructional framework of challenging task in appropriate text on students' literacy growth over time?
2. What effect does direct instruction in text structure have on students' ability to use the rhetorical patterns in text as a text negotiation and comprehension strategy?
3. How does the model of challenging task in appropriate text affect change in the intrinsic motivation of struggling readers?

A 2 (Instruction/Control) X (2 Time) mixed design using the QRI-3 as the pre- and post- measure to determine the effects of the challenging task in appropriate text framework. Two sub-designs related directly to the effects of text structure instruction. A 2 (Instruction/Control) X 2 (Time) design used the structure of QRI-3 retellings as the pre- and post-measure. A within-groups counterbalanced design with the instruction group (N=22) using weekly classroom based assessments as the within subjects factor measured the effects of text structure. A pre – post instruction group design using the MRQ measured increases in students' intrinsic motivation for reading.

In this chapter, I provide an overview of participant selection, a description of instruction, and texts. Finally, the measurement section has three sub-sections: overall literacy growth (*Investigation: Literacy Growth)*, text structure instruction *(Investigation: Text Structure),* and motivation *(Investigation: Motivation).*

Participants

Forty ninth graders participated, 22 in a six-month intervention and 18 as a control group. To identify participants, I assessed 60 eighth graders using the QRI-3 in June, 2003. The testing coordinator at the middle school selected eighth grade students who needed to take the state's Functional Reading Test or students who were below grade level on the Scholastic Reading Inventory, administered to all eighth graders by the school the previous fall. Using pre-assessments, the high school scheduled each instruction group student into a reading class that took place the following fall semester.

Of the 60 students assessed, 56 students were reading at least one year below grade level. To allow for similar reading levels in the treatment and control groups, I created 27 matched pairs based on reading level, as well as gender, special education, and second language, whenever possible. The curriculum coordinator at the high school assigned one student from each of the matched pairs to either the treatment (instruction) or control groups. She then assigned treatment group students to one of six small groups for instruction based on reading level. Over the course of the summer, 14 students dropped out of the study because they would not be attending high school in the fall, leaving 22 students in the instruction group and 18 students in the control group. Upon completion of the study, I provided identical instruction to students in the control group two times per week for the remainder of the school year.

Both the middle and high schools were located in similar lower-middle class communities. The high school is currently on the outskirts of this community and is operating out of an old middle school and portable trailers placed on the parking lots and athletic fields while the district builds a new high school. The state has identified this school as a low-performing school. The population is primarily African American with a large sub-group of Latino/a students.

My study focused on students who were the lowest reading achievers as they entered ninth grade. Students represented a range of demographic and school service characteristics in both the treatment and control groups (see Table 1).

Table 1

Demographic Breakdown for the Treatment and Control Groups

	Treatment	Control
Gender		
Males	14	14
Females	9	4
School Services		
No Services	8	4
Special Education	6	6
Second Language	8	8
Latino/a	10	9
African American	12	9

School-Wide Instruction

In this section, I provide a description of school wide instruction to contrast what typically occurs in high school subject area classrooms and the instruction provided through reading intervention within the smaller discourse communities. I briefly describe instruction received by the control group, who did not meet with me during the first two quarters of the school year as well as by the instruction group students when they were not meeting with me during this same time frame.

The high school where the study took place is typical of many high schools. Students attended class for eight periods per day. In ninth grade, courses typically included English, Earth Science, United States History, and either Algebra, pre-algebra, or a basic mathematics course. Some students also chose electives; others did not have that opportunity. Students taking a basic mathematics course had two periods of math per day. For students in the instruction and control groups who were not receiving other services, this type of schedule was the make up for their typical school day.

Students who were second language learners received two periods of instruction in English as a Second Language (ESOL). This instruction typically focused on the syntax and grammar of English, as well as on basic spoken communication. ESOL teachers reported that their primary focus was to provide L2 learners with a modified high school English curriculum. The teaching of decoding and reading comprehension skill was not a priority in these high-school ESOL classrooms, nor was the teaching of reading for academic purposes. During other subjects, classroom teachers were responsible for modifying the curriculum to meet ESOL learner’s needs. Typically, these modifications consisted of special packets containing frustration-level reading materials and five to ten worksheets that students were responsible for completing outside of class.

Students labeled as special education students received various services. A few were in self-contained classrooms. In these classrooms, a single teacher, or a few teachers were responsible for covering every subject in the curriculum each day. For these students, teachers dealt with instruction primarily via lecture. Students had little opportunity to improve their reading skills. Students who were not self-contained took multi-leveled regular classes with students who were average achievers. Classroom teachers were responsible for modifying the curriculum to meet the needs of these students. However, students were still responsible for regular classroom work. These tasks often consisted of homework requiring students to read a chapter in a ninth grade text and answer the questions at the end of the chapter.

In most classes, students sat in rows facing the chalkboard at the front of the room. Typically, teachers lectured on the material, asked students literal questions about the material, and then posed an assignment to be started in class and finished for homework. Within these multi-leveled classrooms, classroom management issues often arose, preventing teachers from covering assigned material. Content area teachers within each department chose the pace at which county determined curricula would be covered. For example, the ninth-grade social studies teachers decided together upon dates when each unit in the social studies text would start and end. At both the administrative and faculty levels, personnel paid most attention to coverage of content area material. Teachers and administrators seemed most concerned about covering content in order to prepare students for the state-wide assessments. This focus on breadth of content left little room for consideration of learner needs.

There were also a few school-wide initiatives taking place. First, each teacher was required to post a warm-up activity on the chalkboard. Students entered the classroom and began the warm-up while the teacher took role and announcements were made over the intercom. Each week, students and teachers had a list of ten Scholastic Aptitude Test words chosen by the administration. Each teacher reviewed these words with students each day. These ten words were the same for every student in the school. Every teacher posted the words out of context in the classroom. At the end of the week, every student in the school took a quiz on the words for the week.

In the remainder of this section, I focus only on the instruction group who received small group reading intervention once per day.

Within Groups Selection

I assigned students in the instruction group to either the text structure one group (TS1) or the text structure two group (TS2). For the first 9 weeks, TS1 received text structure instruction and TS 2 journaled. For the second nine weeks, the two groups switched (Shown in Figure 3).

Figure 3

Within Groups Counterbalanced Design

Intervention Group (N=12) Text Structure 1 (TS1) Classes 3, 5 & 6	Text Structure Instruction (Treatment: TS 1 Weeks 1-9)	Journaling (Comparison: TS 1: Weeks 10-18)
Crossover		
Intervention Group (N=10) Text Structure 2 (TS2) Classes 2, 7 & 8	Journaling (Treatment: TS 2: Weeks 1-9)	Text Structure Instruction (Comparison: TS 2: Weeks 10-18)

For the within groups crossover design, I wanted similar reading levels in both TS1 and TS2. Because students had to be assigned by whole class, I created three matched sets of classes based on reading level, randomly assigning one class from each pair to either the TS1 or TS 2 group. I was able to control for order to some extent (see Table 2).

Table 2

*Assignment of Matched Classes to the TS1 and TS 2 Groups**

Text Structure 1	Text Structure 2
Class Period 3	**Class Period 2**
Case 1 First	Case 11 Primer
Case 2 Primer	Case 12 Pre-primer
Case 3 First	Case 13 Pre-primer
Case 4 Primer	Case 14 Pre-primer
	Case 15 Pre-primer
Class Period 5	**Class Period 7**
Case 5 Second	Case 16 Primer
Case 6 Second	Case 17 Second
Case 7 First	Case 18 Second
Class Period 6	**Class Period 8**
Case 8 Fourth	Case 19 Fourth
Case 9 Fourth	Case 20 Fifth
Case 10 Fourth	Case 21 Fourth
	Case 22 Fifth

**Note: I did not teach class periods one and four.*

Tasks within the Discourse Communities

This section has four subsections that describe: small group reading classes as individual discourse communities, instruction, instructional fidelity, and text selection. The bulk of this section presents actual excerpts from instructional sessions and frames them according to the six means of assisted performance (Gallimore & Tharp, 1990). Excerpts of instruction are taken from 30 tape-recorded class sessions.

Small Group Reading Classes as Individual Discourse Communities

Swales (1990) discussed methodology and differentiation of task as major access routes toward communicative competence, and provided examples of tasks leading to a goal. This differentiation of task allows experts and apprentices to construct tasks and goals appropriate to the learning needs of its members as well as to the purpose of the discourse community. However, Swales remained non-specific about methodologies for the "procedures of rhetorical analysis, discussion, and anticipation of audience reaction" (p. 81). Notions by Gallimore and Tharp (1990) provide the specifics that Swales lacked. Gallimore and Tharp (1990) viewed what Swales called discourse communities as complex organizational structures. Within such organizations, acquisition and maintenance of individual competencies are conditions for survival of the organization. Assisted performance, then, is logically embedded within the organizational structure of the discourse community. In our discourse communities, Gallimore and Tharp's (1990) six interactions of assisted performance were reciprocal, determined both by myself and the students, and created "patterns of meaning, values, and cognitive structures, thereby creating / perpetuating the culture of the institution" (Gallimore & Tharp, 1990, p.187).

As assisted performance interactions took place within the discourse communities created with adolescent struggling readers, they cut across task and text within all three instructional phases.

While the purpose for each reading class was the same, the levels of texts and the tasks used in each class to work toward the same goal were different, because characteristics of students in each of the six classes differed. First, not all classes were on the same reading level, and even when closely matched, reading levels within a particular class varied. Second, differences among students occurred across classes, even for classes on the same reading level. Some classes were composed of all second-language students; some had a mix of special education, regular education, and second language students. Levels of spoken as well as written communicative competence varied within and across classes. Race and gender also provided differences within and across each class. Therefore, in my study, I initially created an environment in which a discourse community could develop for the students in each of the six classes. However, each of those six discourse communities developed differently, and students in each engaged in text related tasks appropriate to their needs. Consequently, the study is composed of six small discourse communities. Tasks within the discourse community varied for each class, but still allowed all students across the six classes to succeed. In the next section, I use Gallimore and Tharp's (1990) six means of assisting performance to highlight the evolution of interactions and joint construction of task within the individual discourse communities across the instructional period.

Challenging Task in Appropriate Text Framework

In each lesson, students engaged in the three phases of the challenging task in appropriate text framework as outlined in Figure 2, Chapter 2. All students received the first two phases; *Rereading familiar text,* and *Direct guided reading with word study mini-lessons* for the entire 18 weeks. During the third phase, *Taking apart the text,* students learned to use the rhetorical patterns of exposition. Generally, each phase occurred in every lesson.

Description of Tasks within the Framework

The framework is not strictly sequential. In the first phase, students re-read familiar text for 10-15 minutes. Students only re-read texts after they received comprehension instruction during *Phase: II.* Students re-read in pairs, orally, or silently. When students struggled with re-reading, I used echo or choral reading, particularly with non-readers, or Spanish-illiterate English language learners. During echo reading, I modeled a sentence or paragraph fluently, and students orally re-read the text using my model. Swales (1990) indicated that discourse communities evolved to meet the needs of all members. As students gained proficiency, re-reading became embedded in *Phase II,* as they re-read to review, clarify, or prove an answer.

In the second phase, students engaged in text previewing strategies and direct guided reading using texts that they had not read before. This phase focused on cognitive strategy instruction to teach students comprehension strategies with the use of mini-lessons to teach word study skills as needed. It had three sub-sections: pre- reading strategies, during reading strategies, and point-of- need word study.

Pre-reading included activities to anticipate meaning. Each time I introduced a new text, I assisted the students in strategies for anticipating meaning, such as activating background knowledge, and previewing important vocabulary (Brozo & Simpson, 1999). Sometimes, pre-reading activities were informal. Students took picture walks of the text and made predictions. At other times, they involved direct instruction, such as learning to create a word web. The majority of the phase focused on comprehension strategy instruction through my sequence of direct guided reading (DGR). First, either the students or I posed a question. As tasks became more jointly constructed (Swales, 1990), students posed more questions and led more of the direct guided reading. The students or I wrote the question on chart paper or sentence strips while simultaneously verbalizing it. Students read the specified chunk of text silently to answer the question. There were two phases to the answering process. First, the students had to answer the question in their own words. I then simultaneously wrote and verbalized the answer. Next, students had to *prove* the answer by reading only the section of text they used to answer the question. If students could not answer a question, I scaffolded their thinking using questioning until they were able to formulate an appropriate response.

As students became more proficient with comprehension strategies, I varied teacher or student DGR with printed guided reading sheets to help students engage in silent guided reading independently. This task more closely resembled the types of assignments students received in their regular classes. When students completed the guided reading sheets, we discussed their answers as a class. As students gained proficiency, they began to construct these guided reading sheets for themselves and their peers.

The final piece of *Phase: II* was the word attack component, either at point-of-need, or as mini-lessons. When a student struggled to decode a word, I scaffolded the student's decoding so s/he could continue reading. Point-of-Need word attack included strategies such as decoding, phonograms, use of context, structural analysis, cross-checking, irregular spelling patterns, and the simultaneous use of multiple word attack skills. Occasionally, an entire group had difficulty with a word attack or spelling skill. At such times, I included mini-lessons at the end of the guided reading phase, always using words from the text and returning to the text to reread the difficult section.

Phase IIIa: Taking apart the text. During this phase, students focused on the rhetorical patterns found in text (Chambliss & Calfee, 1998). Students also learned to use text features such as headings, glossaries and indexes. This instruction followed a general pattern. First, students learned each type of global structure independent of any sub-structures. After students had experience with global structures, they analyzed sub-structures. I kept a list of structures taught to insure that every class had learned the same eight patterns: list, topical net, linear string, matrix, falling dominoes, branching tree, hierarchy, and argument (Chambliss & Calfee, 1998).

Phase IIIb: Personal response journaling and discussion. In this phase, students engaged in personal response journaling followed by brief discussion. Students kept a personal journal in class. At the beginning of journaling instruction, we discussed possible responses to text, and students listed them on the first page of their journals. When students had difficulty deciding what to write, they were encouraged to refer to their lists. After students wrote personal responses, we engaged in a three-step discussion procedure. First, someone volunteered to read his writing. Second, a student "accepted the piece" by telling the author what she liked about the writing. Finally, students asked the author questions about the writing.

Description of Instruction

The task-in-text framework (Figure 3) guided instruction throughout the intervention period. What changed within the framework to meet student needs were the strategies taught, texts used, levels of teacher control and joint construction of task, assisted performance, and release of responsibility.

For each cylinder in the task-in- text framework, I provide three excerpts of lessons, one each from the beginning, middle, and end of the instructional time. To illustrate how the discourse communities evolved across the six-months of intervention, I use Gallimore and Tharp's (1990) six modes of assisting performance to describe the instruction: instructing, questioning, contingency management, modeling, feeding back, and cognitive structuring. In this way, I highlight how the modes of assisting performance changed within the discourse communities as students gained communicative competence. It is important to note that the strategies and methods used to illustrate the framework are not the only viable options. What *is* important is that students' needs were met within each section of the framework.

As defined by Tharp and Gallimore (1990), six means of assisted performance occurred to varying degrees within the discourse communities designed for adolescent struggling readers. During *instructing* teachers provide explicit information about a strategy students can learn to control (Duffy, 2002). *Feeding back* allows the teacher to provide the student with performance feedback that is compared to a standard. *Assistance* *questions* require active verbal engagement by the student while allowing the teacher to provide scaffolding. *Contingency management* can be used to create a risk-free environment via positive feedback. *Modeling* provides students examples that show clearly how an expert would perform a task. The last means of assisting performance suggested is *cognitive structuring*, or providing concrete examples that lead students toward the development of abstract models (Tharp & Gallimore, 1990).

The task of rereading in appropriate text: In the next three excerpts (Figures 4-6), I present examples of students engaged in rereading. The first rereading example is taken from a September class of students who were second language (L2) learners who were primarily English as well as Spanish-illiterate. In the first excerpt, one student from this class was rereading the astronauts text. The second excerpt from October is taken from a class composed primarily of special education students who began instruction at a level 2 or below. The third excerpt is from this same class of special education students. I first present all three excerpts and then contrast differences taking place across the framework to illustrate how rereading as a task in text changed across the instructional time. With each different task, rereading, strategy instruction, and text structure, I highlight those means of instruction that changed across time as interactions within the discourse communities evolved. In each excerpt, T stands for teacher, and the numbers represent case numbers assigned to each student.

Figure 4

Second Language Student engaged in the task of rereading in September

---

11:	*Astronauts work in outer space. It takes many years of training// to become an astronaut. Astronaut learn how to float in space. Astronaut practice walking under water. Astronaut eat special food in space. Astronaut wear special swit in space.*
T:	What kind of suit?
11:	Swit?
T:	Suit. What is suit?
11:	um, the clothes?
T:	Um, hmm.
11:	*Alan Shepan*
T:	Shepard
11:	*Shepard was the first American in space. John Glenn was the first American to orbit Earth.*
T:	Remember what orbit is?
11:	Yes.
T:	What is orbit?
11:	The way the ship go around.
T:	Yes. Good.
11:	*Neil Armstrong was the first person to walk on the moon. He placed a United States flag on the moon. Sally Ride was the first American woman in space. Roberta Bondar was the first Canada-ian woman in space.*
T:	How do you say that word?
11:	Canada-ian
T:	(Verbally syllabicating and writing on board) Can/a/di/an. Can-*a* -dian. Keep reading.
11:	*Scientists use hug telescopes to look at the planets and moons.*
T:	What is that word after use? What does it mean?
11:	Big
T:	It means big. Huge. (Showing with my arms).
11:	*Huge telescopes to look at the planets and moons.*
T:	Re-read the whole sentence now that you have the word huge.
11:	*Scientists use hug…*
T:	Huge
11:	*Scientists use huge telescopes to look at planets and moons. Satillit travel into space to tell us ab//about different planets.*
T:	(Verbally syllabicating and writing on dry erase) Sat/ell/ites
11:	Satellites. *Someday you might travel into space.* Thank you so much.

Figure 5

Special Education Students Engaged in a Rereading in October

1: *Dogs can be just about any shape or size. Some are so tall that they can rest their head on a /// kitchen table*
T: Good!
1: *O//others are so small that they can fit in a*
T: Try a skip. Fit in a what? A bowl? What kind of a bowl?
1: Cereal bowl!
T: Aah, now reread the sentence,.
1: *Others are sos/ so*
T: So
1: *So small that they can fit in a cereal bowl. Some have hair so long it touches the floor And others have no hair at all.*
T: Good. What did we decide the author was comparing on this page?
3: Size and hair length.
T: Size and hair length, ok! Another reader? Candy.
4: *Most people enjoy having a dog for a pet. Dogs are usually friendly. They lake/like to be petted and play/ and play to games.*
T: Did that make sense?
4: Hmmm. Play.
T: They like to be petted. Start there.
4: *They like to be petted and to play games. Most dogs are very loyal to their owners. Dogs would do just about anything to please them.*
3: *Dogs can be trained to do many special jobs. Some/ some are watchdogs or helpers on farms. Others help people who cannot see or hear. Some learn/some learn to do tricks that make people laugh. But most dogs justhave a/ just have the job of being a pet.*
1: *Many dogs protect their owners when they/ when they sense danger. Some may/ some may even attack or bite. Attack or bite.*
T: Oh, very nice self-correct.
1: *Police dogs are good at protecting people. Most of these dogs are German shepherds. They help police by sniffing out danger.*

Figure 6

Special Education Students Engaged in the Task of Rereading in December

---

T: Your first question for page 3 is (say and write) Why is a temperate forest called a community? I want you to read page 3 in your head.
1: What's the gr sound?
T: gr, where are you? (In the text)
3: grocer
1: (shows me) grocer. Do you know what a grocer is? (Shakes her head, no) That's not a common word anymore. It's a person who used to have a small grocery store. (Silent reading continues)
1: This pl-as-ant?
T: Yes, pleasant
1: Pleasant.
3: Can I read this page?
T: We're going to answer the question first. Why is a temperate forest called a community?
3: It has families
4: It has life and activity
3: Doctors, dentists, teachers, it's like a normal community but it's in the forest?
T: I want you to prove that. Find something that proves your answer.
3: *The plants and animals in this forest are helpful to one another.*
T: Good. It's like a community because the plants and animals are helpful to one another. Good.
T: Where else is your answer proved?
4: Umm. (She is sub-vocalizing and skimming)
T: Ok, I'll give you a hint. It's in the second paragraph. You found it once. Can you find it again?
4: *Beyond the family's backyard lies another kind of community that is also full of life and activity.*
T: Um-hmm. It's right there. The community beyond the backyard, which means the forest, right?
4: Um-hm
T: Is full of life and activity. Darla asked to read (aloud). Go ahead.
3: *A family lives in a house on the edge of a small/no/ a small but busy town. The family likes being part of a community. There is a grocer and / I mean/ there is a grocer who sells food. There are police officers and firefighters to keep citizens safe. There are doctors, dentists, teachers and librarians all who///help make the neighborhood a pleasant place to live. Beyond the family's backyard lies another kind of community that is also full of life and activity. This neighborhood is a temp/er/ate forest. The plants and animals in this forest are helpful to one another. Oak trees ` provide homes for the…*
4: robins
3: robins.
T: What's a robin.?
4: It's like a little bird.
3: *The birds eat seeds and drop some on the ground. Then earth….*
4: *worms*
3: *worms loosen…..*
T: loosen
3: *Loosen the soil and make it easier for new plants to grow.*

Teacher input varied greatly across these three excerpts because learner needs were changing. Clearly, the type of assisted performance offered at point-of-need varied greatly from September to December. In the September readings, I spent much more time instructing the student. I chose to focus on conceptual knowledge over word attack, as Clay (1990) suggested, and therefore gave the student some words (satellite, huge, suit, Shepard) without scaffolding him through a repertoire of on-line word-attack strategies. However, in the second example about dogs, I used much more questioning and feeding back to assist the partially independent performance of the student. For example, I suggested that the student “try a skip” and then asked contextually relevant questions until the student read the word. I used questioning as assisted performance and allowed wait time because, by this point in the instruction, we had focused on some of the word attack strategies I chose to ignore in the first excerpt. Because this was true, feedback and contingency management also changed. In the first excerpt, I gave the student directions for the next performance, such as “reread the sentence.” In the October excerpt, after students became better at independent use of strategies, I used feedback as simple praise, “good,” or to let the student know she used a strategy appropriately, “Nice self-correct.”

The final excerpt, from December, is a clear example of how the task of rereading evolved. By December, this class was reading lengthier and more conceptually dense text. Therefore, the task of rereading changed to meet the demands of both the members of the discourse community and the text. In this case, rereading was primarily a means through which students could apply and solidify conceptual knowledge during the guided reading phase of instruction. In the December excerpt, students were using rereading to prove their answers immediately after they had read silently. This was a rereading task as well as a cognitive structuring task because the student had already read the chunk of text silently (Tharp & Gallimore, 1990). However, because so much discussion of text had occurred throughout the guided reading discussion, I deemed that it would be wise to have a student reread the entire paragraph. Further, because this rereading was at the request of an apprentice member, she defined the task for herself.

One final point to consider is the number of teacher-to-student interactions and student-to-student interactions. By December, the discourse community had evolved to the point that students were comfortable discussing text without me. For example, when answering the question of why a temperate forest is called a community, students 3 and 4 both provided answers prior to my requesting that the students prove their answers. At the end of the selection, a student provided instruction to another student when she could not decode the word *worms.* By December, because students had more literacy skill, they were able to engage in more joint construction of meaning through both discussion of text as well as through assisting each other's performance. As students took over more of these roles, as the expert, I was able to focus more on content knowledge acquisition during guided and rereading.

The task of acquiring cognitive reading strategies in appropriate text. The next three excerpts focus on the task presented to apprentice members of the discourse communities of acquiring cognitive reading strategies. This often took place through a direct guided reading framework (DGR). This is a loosely designed methodology that allows students to focus simultaneously on both word attack and comprehension skill. First, a question is posed; then students read a chunk of text silently to answer the question. Next, the students answer the question and the question is written. Finally, students read orally only the section of text that proves their answers. The next three excerpts highlight how assisted performance and joint construction evolved during DGR as students became skilled readers.

In the first excerpt, I conducted this September lesson with the group of students who were L2 learners, and non-readers. They were reading a text on wolves. The second excerpt is also from a September lesson. However, these students began the program reading at level 4. I use these two excerpts to indicate the difference across discourse communities at the same time period of instruction. I chose the final excerpt from a different class of students who began the program reading at an instructional level 4. The final excerpt is from a December lesson.

One of the things I found common across classes was the need for students to learn to answer the question posed. Therefore, I taught a modified version of Raphael's (1986) Question-Answer-Relationships (QARs). Students defined the types of QAR's using numbers. A "one" question was a literal question found in the text. A "two" question was an inferential question requiring both textual and background knowledge information, and a "three" question was an extension question, where no part of the answer was found in the text.

Figure 7

Second Language Students Engaged in the Task of Strategy Acquisition in September

---

T: Why would wolf packs do things together? (Writing and speaking simultaneously). Rui, I think you need to read the question for me.
15: *Why would wolf packs do things together?*
T: Read page 6 in your head and answer the question.
15: I got it. They like to work together because they like to share their food.
12: And water.
T: Ok. (Writing) Ok they find food together. That tells me *what* they do. I want you to think about *why* they would do that.
15: Because they are like a- brothers. They are family.
T: They are like a family. What do families do?
14: Share together.
T: They share together and that helps them what?
15: Live
T: That helps them live. That helps them survive. Good. (I restate and write) Is that a 1, 2, or 3?
14: 3
T: Why?
14: It's all in your mind.
T: Is it all in your mind? It doesn't give you any clues? (the text)
15: Oh it is number one. It is right there in the book.
T: Is it right there? Because it helps them survive? Does the book say "Wolves live in groups to survive?"
14: I think its 2
15: I think its 3
T: What clues does the book give you?
14: I say we are confused.
T: I say you are confused, too. What clues does the book give you?
15: They like to share.
T: Ok. It tells you that they DO share. It doesn't tell you why. So you have to take what's in the book – *they share food and water* (I read this) and decide *why* in your brain. Is that a 1, 2, or 3?
15: 2
T: That's a 2. The clues in the book plus what's in your head, right?
14: Yeah
T: Everybody understand now?
16/14: Oh, yeah.
T: Ok. Somebody read the page.
12: *Wolves do many things in packs. They look for food and water together. They hunt many kinds of animals. Wolves share their food with the pack.*

Figure 8

Level 4 Students Engaged in the Task of Cognitive Strategy Acquisition in September

---

S1:	Why would farmers want to dry corn first?
S2:	Text and me. You need to be on the animal page.
T:	He's on the right track. You need to be on the animal page. Somebody read that paragraph.
S3:	*Some corn is left on the stalk a month after it is ripe. It dries out and turns brown. It can dry hard corn because*
T:	What?
S3:	*It can/ Then the dry hard corn can be used as food for animals. Farmers use this corn to feed cattle hogs/cattle, hogs, chickens and sheep.*
T:	Why would the farmers want to dry it?
S3:	So they can feed the animals.
T:	Yeah, But the animals can eat fresh corn. (pointing to the photo) So why wouldn't they just give it to them fresh?
S1:	Cause after a while it would turn brown and moldy
T:	Oh. If the corn is dry, do I have to use it right away?
S3:	No
T:	So why would farmers want to dry corn?
S1:	So they can keep it.
S3:	Cause the animals don't eat it all right away
S4:	To save it.
T:	Good. We are on page 16. Who has the questions for *A Tasty Food*?

Figure 9

Level 4 Students Engaged in the Task of Cognitive Strategy Acquisition in December

---

T:	So we are going to do chapter one together and then you guys are going to be writing questions for your own chapters to be the guided reading teachers. Chapter 1, you're reading in your head. The questions are – How did slavery begin in the united states.(I am interrupted)
9:	Why would African tribes kidnap and sell other Africans? What was slavery like? Why did the underground railroad begin? (The student is reading from a printed sheet of guided reading questions.)
T:	What is the underground railroad. Do you know?
11:	Yeah
9:	Helped slaves get set free.
T:	Ok, so you're reading chapter one in your head (Wait time as students read).
11:	I know this one I think. (Referring to a question on the sheet)
T:	What do you think?
11:	You know when they came over? What were those people called? P
T:	Poachers?
11:	The poachers came over and said they would take them if they didn't catch some other African Americans. I watched *Kunta Kinte*
T:	I watched it too. It was a good movie.
11:	No it wasn't. It was really sad.
T:	It was terribly sad. You are reading the chapter silently.
11:	That's a very good question. (Pointing to the question on the guided reading sheet)
T:	Well answer it. How did it begin?
11:	Oh, whatchamacalit
T:	You need to be more specific.
8:	It's right here.
9:	It was people that was supposed to go to jail but they worked.
T:	What is the word?
8:	Indentured.
T:	Indentured servant. What is an indentured servant?
11:	People who agree to work for seven years rather than go to jail.
T:	Ok, so people came here as indentured servants, right? But then what happened?
11:	But then seven years turned into a lifetime.
T:	Right. Their owners didn't let them go. Someone read the part that proves that.
9:	*As time passed, planters in all 13 British colonies used indentured servants to work on their farms and plantations. Some of these servants were white. They worked for seven years and then were free to find jobs that paid wagons*
11:	*wages.*
T:	What are wages? It paid wages so wages are…
11:	Payment for work done.
T:	Yep, keep reading Evan.
11:	*no laws protected indentured* - that doesn't sound right to me - *servants. For many Africans it often turned into a lifetime of work without pay/ that was how slavery started.*
T:	So what is an indentured servant Evan?
9:	Binding contract in which one person agrees to serve another for a certain period of time
11:	Instead of going to jail.

With these three excerpts, the primary means of assisting performance was questioning. However, across the three, the questioning and construction of questions changed. In the first excerpt about wolves, strategy acquisition was very teacher – directed. I posed a question and students had to read to find the answer. Embedded within that questioning was cognitive structuring to assist students in understanding how to answer the question asked. At first, students answered the question of *what* wolves do in packs. I was able to use questioning to help them reach an inference as to *why* wolves might live in packs. As this exchange took place, students were learning how to use text to make inferences. Another embedded mode of assisting performance was instructing. I told students that they had not answered the correct question. Again at the end, after students reached an inference, I explained how they did so.

The second excerpt from September was an example of student-generated questioning. Because these students possessed more literacy skill, they were able to engage in more joint construction from the beginning of the instruction. It is clear that they already understood the difference between literal, inferential and extension questions. However, I still needed to use questioning to assist them with answering an inferential question. The primary difference here was that Student "1" wrote and posed the question to the rest of the class. While there was still a good bit of questioning from me, there were also times when exchanges occured between apprentice members of the community, particularly between S1, S2, and S3 during the first six lines.

This entire excerpt reads much more like a general discussion of text than does the first excerpt about wolves. Questions and answers occurring throughout the excerpt, while still focused on inference, were closely tied to the task and text. All I had to do was ask assistance questions.

The third excerpt is interesting because, while this class also began at a level 4, it is a December excerpt, and the task within text changed to meet the needs of community members. In this lesson, I gave the students a written guided reading sheet. They had to read the chapter and answer the questions so they could engage in a discussion of the text. At this point, questioning was the major means of assisting performance and questions were teacher directed. Because it was December, my goal was to work students toward independence within the discourse community rapidly so they would be able to function better within the high school. Notice, too, that the text these students were reading is more difficult and conceptually dense. Therefore, I briefly re-gained some control, decreasing joint construction (Swales, 1990) until I was sure that students were capable of handling this text using the guided reading sheet as a scaffold.

Although I assigned the task in text, interesting things were still occurring. First, in a natural manner, S9 took over the reading of the questions on the sheet. Further, when a student made a personal connection with the text, I engaged in a brief discussion with her, but then used contingency management to return her attention to the text. That same student then decided for herself that “That was a very good question”, indicating that while the question was teacher posed, she was willing to take ownership of the question. Again, there were places where exchanges happened between students without my input. At one point, a student showed another student where to glean information. Students 9 and 11 finish off a discussion about indentured servitude between themselves. Finally, as student 11 is reading about indentured servants, he began thinking aloud “that doesn’t sound right to me.” I did not intervene and he corrected his comprehension problem for himself without any type of assisted performance.

What this excerpt provides is a very interesting mix of joint construction and ownership by students with a relatively high level of assisted questioning, indicating that students are moving from viewing themselves as apprentices to understanding how to engage in the construction and joint construction of meaning from text.

The task of using text structure to construct meaning from appropriate text. To highlight the evolution of the discourse communities with the task of learning to use text structure, I provide three excerpts from three different classes. In the September lesson (Figure 10), a class of students composed of regular and special education students who began the program at a level 1 were engaging in creating a text map for the first time. In the October lesson (Figure 11), the class composed primarily of students identified as special education students were working in pairs on a text map about dogs. In the December example (Figure 12), students from one of the two classes who began instruction at a level 4 were sharing independently created text maps.

Figure 10

Students with Lower Reading Proficiency Engaged in the Task of Creating a Text Map

---

T: So what does it have to be?
S2: A topical net.
T: Ok. All the main ideas connect to the big idea. What's the big idea? (/// Wait time) Pizza. (I write on chart in circle) What are my subtopics?
All: Pepperoni, peppers
T: Read the whole page. What's the page about?
S1: People love pizza.
T: Ok my sub-topic is people love pizza. And under my sub – topic what is the main idea?
7: People everywhere love pizza
T: (I write *people love pizza* in an oval connected to the main topic of pizza) What are the supporting details that prove the main idea?
S1: Eat at restaurants
S3: Have it delivered.
T: (I repeat answers as I write them onto the chart) MI = Main Idea, SD = Supporting Detail).

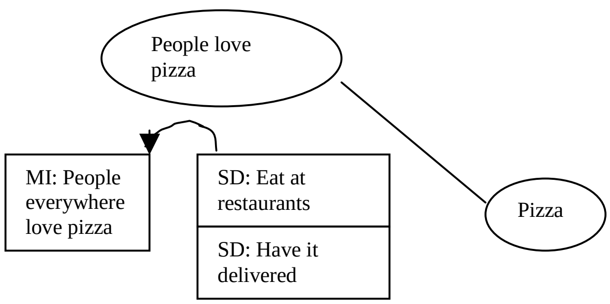


Figure 11

Special Education Students Engaged in the Task of Jointly Constructing a Text Map

---

S1:	It's a topical net with main ideas and supporting details.
T:	Topical net with main ideas and supporting details.
T:	(To S1) I want you to get it on the map.
S1:	No, I'm practicing. (She's making a list of the types of working dogs on the board)
T:	You're getting organized? Ok.
S4:	And all these working dogs? All of em?
T:	S1's got a good start here. Why don't you talk to her about what she's doing?
S1:	(To S3) I'm writing down the jobs. And the main idea is dogs. (pointing to center of map)
T:	(To S3) Ok, it's a topical net. What goes in the center? Just dogs? (S3 has started a net and put dogs in the center.)
S3:	Working dogs.
T:	Working dogs, yeah. Cause we're only mapping the section about…
S1:	Working dogs.
	(They began to work in pairs without my help)

Figure 12

Example of Two Level 4 Students Engaging in the Task of Sharing Text Maps

---

22: All right. Everybody done reading? (S22 began reading from his self-created text map). Scott Joplin was born around 1867. He lived in Texas. He had a musician family. When he was young, Joplin learned to play songs on his mother's banjo. By the age of 7, he could play any chord he heard. He could also remember just about every tune he had listened to. While Joplin was still very young he learned to play the piano, violin and accordion. When he was 20 years old, Joplin began to travel around the country playing the piano in boarding houses and dance halls. All right that's all I got for *early years* (a topic on his net)
T: Ok, so you have Scott Joplin in the center that connects to our overall thing of musicians, right?
22: um-hmm
T: And you just did a sub-sub topic on early years. Gentlemen, do you agree with what he decided about Joplin's early years?
21: Yeah?
T: How did you depict Joplin's early years on your map Raymond?
22: It's a linear string. Is that ok with you guys?
T: Does that make sense?
20: Um-hmm
22: I know I had to flip on to Joplin's training (meaning that he put some things on the map that were in a different order from the presentation in the text) (Reading from his text map) The main idea and supporting details. Joplin was accepted to George Smith College in Sedalia. While he was studying, Joplin played piano all over Sedalia. He often performed in a club called the maple leaf.

21: Aaron Copland. I start off with his life.
T: Ok. What kind of structure did you use to do that?
21: A linear string.
T: All right
21: He was born in 1900 and he grew up in Brooklyn New York. He had a sister that gave him piano. And he didn't like his sister being his teacher because and everybody thought she knew more but she didn't.
22: I disagree. Make one box.
T: Ok those two boxes could be in one block?
22: Yeah.

**Note: Indicates a break in the lesson.*

In the first excerpt, this is the first map this class completed including both global and sub- structures. I used modeling of the text graph as the predominant assisted performance technique (Gallimore & Tharp, 1990). Embedded within that modeling were instructing, "all the main ideas connect to the big idea", and assisted questioning. As the lesson progressed, the group began to discuss topics with independent sub-structures. Because students had not dealt with sub-structures yet, they were responsible only for locating the main ideas and supporting details in the text. I provided the outline for creating a text map by drawing the diagram and placing their answers in the appropriate location. Even in this September lesson, it is important to note that within the discourse community, students were not required to raise their hands or be called upon to answer questions. They simply offered their ideas, “eat it at restaurants,” or “have it delivered”, as they were comfortable.

The major evolution in the October lesson was that students were working together in pairs. Although there are multiple examples of feedback, I was encouraging the students to draw upon each other’s knowledge. In the middle, I encouraged a student to ask another student for feedback. Further, when a student iterates a strategy to me, I accepted her strategy and provided positive feedback for that strategy. Because students had been working on text mapping with more teacher direction, the performance expectation supported by feedback in this situation was that students would be able to create maps in pairs drawing upon their partner’s as well as my knowledge when needed.

In the December example, each student in the class was responsible for reading a chapter about a musician and independently creating a text map. Further, each student was responsible for reading the entire text. Individual students shared their maps with the class to create one large map of the entire text on musicians. When a student shared, the rest of the group was responsible for deciding whether the student’s map accurately detailed both the content and the structure of the text.

The most important thing to notice with the December lesson is that, although I am still providing assistance, the construction of task was shared among the members. When the first student presented his map on Joplin, he first asked if everyone was done reading. He then began instructing using his map. At one point, he questioned his peers, asking them if his linear string was acceptable. Again, at the end of the Joplin example, the student was instructing when he explained to the class that he had to rearrange some details on his map in a manner that did not follow the text. When the next student presented his map on Copland, without prompting, another member disagreed with what was on the map and was able to state why.

Within these transactions, I was still part of the discourse community. Primarily, I used questioning. However, the purposes for my questions changed. Once, I asked for a clarification. At one point, I used a question to model my expectations by asking the class if they agreed with the Joplin map. At another point, I used questioning as contingency management to keep the student moving through his presentation of the map. According to both Swales (1990) and Tharp and Gallimore (1990) these students might be demonstrating competence both in a specified genre community as well as with the internalization and proficient use of an abstract system (cognitive structuring) (Tharp & Gallimore, 1990; Vygotsky, 1978).

Instructional Strategies Used.

The instructional excerpts illustrate some of the reading strategies students developed through socially and textually assisted performance as the discourse communities evolved. However, students also learned many other cognitive strategies across the framework. Before, during and after, reading strategies included, but were not limited to, making predictions, activating prior knowledge, using text features, discussion of text, use of context, understanding the elements of exposition, understanding the author's purpose, using text features, discussing text maps, journaling, journaling discussions, summarization, and critical evaluation of text. Students also learned to use a variety of word attack skills such as cross checking, analogy, use of context, vowel patterns, grapho-phonic relationships, phonograms, re-reading, and structural analysis.

The ultimate purpose for each strategy was to build confidence and independence. Strategies were used in context, and I provided only needed assistance, releasing responsibility as students became more independent in their use of comprehension and comprehension monitoring strategies.

Instructional Fidelity

To insure that I was following my own 3- phase framework across all six months, and that no text structure tasks occurred during the journaling phase, I conducted fidelity checks. I audio taped one full day of reading classes mid-month in September, October, November, December, and January, yielding 30 taped class sessions, 5 from each of the 6 small groups. For fidelity checking, I chose the same number of lessons from the (TS1) and (TS2) groups, at least one lesson from each month, and at least one lesson from each of the 6 reading classes. I numbered each lesson within the TS 1 and TS 2 groups and randomly pulled lessons until I had met this criteria (see Table 3).

Table 3

Instructional Fidelity Checks

Text Structure 1		Text Structure 2	
September	3^{rd} Period *		
September	2^{nd} Period	October	8^{th} Period
October	5^{th} Period	November	5^{th} Period
November	6^{th} Period	November	7^{th} Period
December	8^{th} Period	January	7^{th} Period

Note: * This lesson was used as the first practice lesson and checked by all raters.

Three experts in the field of reading volunteered to evaluate the lessons for fidelity. Two experts evaluated two lessons each, and one expert evaluated four of the lessons. The experts participated in a 60 minute training session on the phases of the instructional framework. I chose a text structure lesson to insure that raters understood what types of activities would be considered text structure. The checkers were instructed to evaluate chunks of the lesson as *Phase I, II* or *III,* and to indicate if the lesson included text structure. All experts evaluated the September, 3^{rd} period lesson at the training. They reached 100% initial agreement without discussion.

Raters did not know whether they were checking a text structure lesson or a journal response lesson. Overall, raters evaluated nine lessons (30% of the audio tapes) with 100% agreement on all lessons, indicating a high level of fidelity to my framework. Because of the high rate of agreement, I concluded that computing interrater reliability was an unnecessary step.

Text Selection

Texts for this study possessed four distinct characteristics that would allow students to read at their decoding level while still providing them with challenging tasks: coherent structure, clear signaling devices, links to interest and prior knowledge, and density of ideas. I selected texts from a single publisher to help control for random variance across texts while keeping in mind my four criteria for promoting cognitive challenge in low-level exposition. To select a publisher, I graphed many of the texts to determine the clarity of the rhetorical patterns, after which, I evaluated concept density and varied vocabulary.

The Steck-Vaughn Pair-It, Series (1998) fulfilled most of these requirements. Many of the texts covered topics in the biological and physical sciences. Others covered social studies topics such as famous athletes. I judged that these texts would hold student interest. Many of the texts in the series also contained effective signaling devices with tables of contents, glossaries, boldface vocabulary words, headings, indexes, photographs, and captions. The lowest levels of text did not contain signaling devices beyond photographs. However, there were enough signaling devices in the remainder of the texts that I felt they would still be effective. As a final step, an expert rater graphed the same texts, discussed with me whether they met my criteria, and agreed that they would be acceptable.

Choosing text not only from a single publisher but also from a single series helped to control for random variance across text. Because eight authors collectively wrote 23 of the 38 texts in the series. Each of these authors wrote from two to five different texts. Finally, Steck-Vaughn has leveled the Pair-It (1998) series into three basic categories:

emergent, fluent and proficient. At the emergent level, one author wrote three texts and another wrote four. At the fluent level, two authors each wrote four texts and two authors wrote two texts each, accounting for 12 of the 17 texts at the fluent level. All students across the study read all of the fluent level texts. At the proficient level, two authors wrote two texts each. A complete bibliography of the texts used in this study is listed in Appendix B.

Tables 4 and 5 show the texts used in the study. In table 5, the first column indicates the publisher's text level, and keywords identifying the texts, arranged by reading level from simplest to most difficult. The second column indicates the global structure of the text and the third shows the numbers of sub-structures.

Table 4

Structural Properties of Texts Used in the Study.

Text Keyword and Stage	Global Structure	Sub-Structure Counts
Early Emergent		
Sports	List	None
Frogs	List	None
Bugs	List	None

Emergent Stage 1

Bats	List	None

Emergent Stage 2

Who Lives in the Woods?	List	None
Seasons	Branching Tree	2
Sharks	Matrix	None
Beach Creatures	String	None
Astronauts	Topical Net	None
Wolves	Topical Net	3

Early Fluency Stage 3

Pizza	Topical Net	4
Farm Life	Linear String	3
Animal Homes	Topical Net	7
Pet for You	Topical Net	5
Lions	Topical Net	13
Amazing Trains	Linear String	12
Storms	Topical Net	11
Japan	Topical net	8
Spiders	Topical Net	8
Snakes	Topical Net	3
Corn	Topical Net	6

Fluency Stage 4		
Gail Devers	Linear String	3
Animals in Danger	Hierarchy	32
Deserts	Topical Net	15
Explorers	Linear String	11
Take Care of Earth	Topical Net	8
Proficiency Stage 5		
Forest Community	Matrix	43
Think Like a Scientist	Matrix	24
Fantastic Animal Features	Matrix	20
Fossils	Topical Net	13
Ocean Life	Matrix	22
Pioneer Way	Topical Net	11
Nature's Power	Hierarchy	26
Proficiency Stage 6		
Musicians	Matrix	15
Underground Railroad	Topical Net	14
Ecosystems	Hierarchy	22
Maryland	½ Linear String	21
	½ Topical Net	

At each stage of proficiency, text difficulty increases. As texts become more difficult, the number of sub-structures increases. Table 6 shows one text from each level indicating the number of sentences or paragraphs per page, the number of topic changes, and the number of chapters and page numbers.

Table 5

Properties of Texts Used in the Study

Keyword/Stage	Words, sentences or paragraphs Per page	Topic Changes	Chapters/ Pages
Early Emergent			
Frogs	1 4-word sentence per page	0	0/8
Emergent Stage 1			
Bats	1 4-5 word sentence per page	0	0 /8
Emergent Stage 2			
Sharks	1 6-10 word sentence per page	0	0 / 16
Early Fluency Stage 3			
Dogs	2 4-6 sentence paragraphs every other page	12	3/23

Fluency Stage 4			
Explorers	2-3 8-10 sentence paragraphs per page	13	7/31
Fluency Stage 5			
Ocean Life	4 to 5 6-10 word sentence paragraphs per page	20	10/38
Proficiency Stage 6			
Ecosystems	4 to 5 8-10 word sentence paragraphs per page	29	6/37

The number of sub-structures, taken together with the number of topic changes, sentences and paragraphs, chapters and pages, is also indicative of an increasing amount of concept density, technical vocabulary, and signaling devices as texts increase in difficulty.

Steck-Vaughn (Personal correspondence, 2003) leveled books using guidelines from *Guided Reading* (Fountas & Pinnell, 1996), work with Reading Recovery teachers, and the Harris-Jacobson readability formula (1980), checking for difficult vocabulary and sentence structure that could skew readabilities. The publisher then field-tested the books with children across states in grades K-6 to determine the accuracy of the leveling. The publisher has not made statistical or procedural information about readabilities or field testing available.

In my study, students progressed through texts in the order listed by the publisher regardless of whether they were in the TS1 or TS 2 groups. Consequently, all classes received instruction in the same rhetorical patterns, controlled for text level, as students progressed through the texts, adding an extra control on random variance across texts.

All students read the texts from the *Early Fluency Stage 3,* beginning with the book about dogs, through*Proficiency Stage 5,* ending with the text about nature's power. The eight students who entered the program reading below a QRI-3 Level 1 also read all of the texts from *Emergent Stage 2,* beginning with *Who Lives in the Woods,* through the text about trains.

Text Analysis

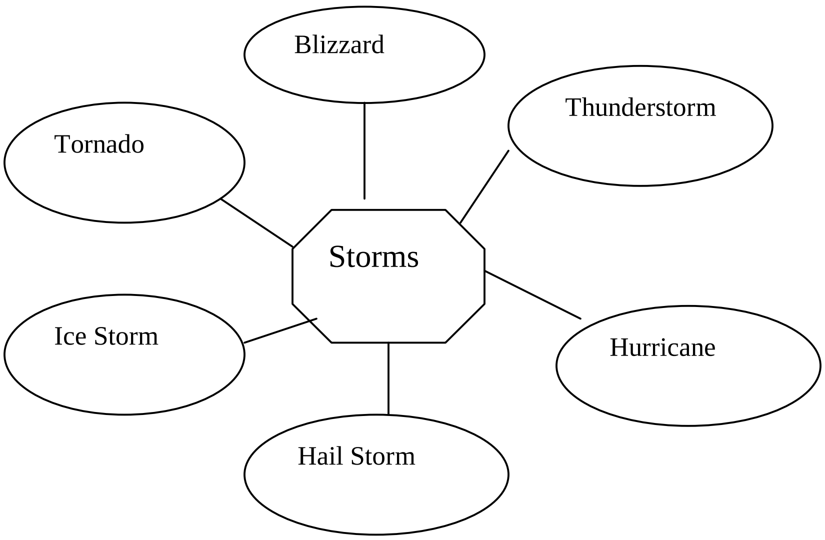
I analyzed both the QRI-3 oral reading passages and classroom texts for their underlying structures. I first report on how the classroom texts were analyzed, and then on how the QRI-3 oral retelling passages were analyzed.

To graph each of the 28 classroom texts, I first decided if the author's purpose was to inform, argue, or explain (Chambliss and Calfee,1998). I then graphed each text according to its global structure and sub-structures. The Chambliss and Calfee (1998) model for this text graphing is reported in Appendix A.

Figure 13 is a graph of the text on storms. The author's purpose is to inform; he does so with the topical net structure, the loosest form of descriptive structure found in text (Chambliss & Calfee, 1998). Each topic in the net is held together only because it is linked to the overall topic of storms.

Figure 13

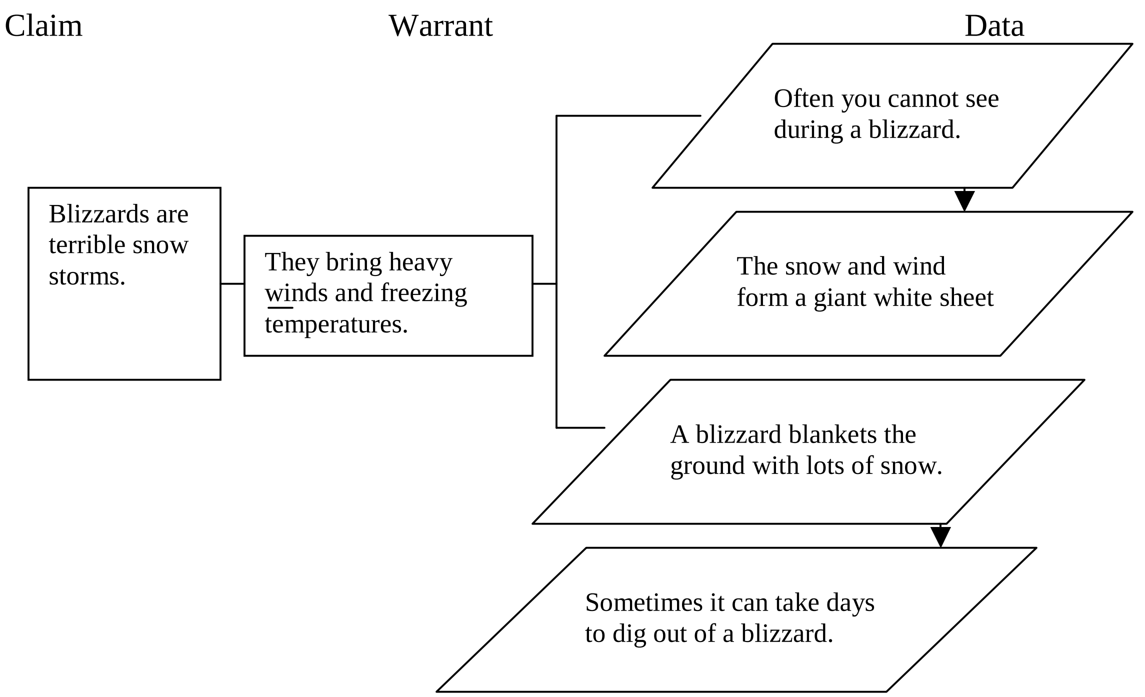
Topical Net of Storms (Leslie, 1998)



The overall global structure presented as a topical net is a structural pattern students see frequently in school (Chambliss & Murphy, 1995). However, sub-structures within the global structure of the text can also be graphically depicted. In figure 11, a single section of the storms text is graphically depicted as an argument with a falling dominoes (cause and effect) pattern.

Figure 14

Argument Structure of the Section on Blizzards



Accuracy of Classroom Text Analysis.

To determine if the Chambliss and Calfee (1998) model could be used by a non-expert, I employed a rater to analyze some of the texts. I spent three hours training her in the Chambliss and Calfee (1998) model, first explaining its components and then modeling text graphing using parallel texts from the same series. Finally, the non-expert rater graphed two parallel texts independently. The rater then created full graphs for eight of the texts: *Pizza for Everyone, Animal Homes, Spiders, Explorers, A Forest Community, Pioneer Way, Amazing Trains* and *Underground Railroad.* She also agreed to read, take notes, and discuss 12 other texts with me. To further double-check my text analysis, an expert analyst read and graphed *Lions*, *A Look at Snakes, Natures Power, Ecosystems*, *Storms*, *Season to Season*, *Life in the Desert* and *Frogs.*

The global structure graphs of the nonexpert rater did not match with mine on five of the texts, necessitating discussion to reach consensus. Only one of the expert's graphs did not match mine, necessitating discussion to reach agreement. I reached 100% initial agreement with both raters on the remaining 26 texts.

QRI -3 text analysis. The same two outside readers and I also analyzed QRI-3 Passages according to the Chambliss and Calfee (1998) model. The expert rater graphed half of the passages used for assessment, and the non-expert rater graphed the other half. Training conditions for the non-expert rater remained the same. The non-expert rater practiced first in parallel forms of the QRI-3 passages. She then graphed the passages used for the study. I compared my own text graphs to those of the two raters, reaching 100% initial agreement on nine passages. On the one remaining passage, the expert rater and I reached agreement through discussion.

Measures

Investigation Literacy Growth

Investigation Literacy Growth employed a 2 (Instruction/Control) X 2 (Time) design using QRI-3 scores from June, 2003 and January, 2004. I conducted a mixed analysis of variance (ANOVA) using pre-and post- QRI-3 scores as the within subjects factor, and group as the between subjects factor.

The QRI-3 is an individually administered published informal reading inventory (IRI) used to observe, analyze, and record data about strategies a student uses during reading. This instrument provides diagnostic information about how a student processes text at various levels of difficulty. The QRI-3 more closely aligns with “real” reading students must do in school than standardized testing instruments. Further, both the QRI-II and the QRI-3 have been used in published research (i.e., Leslie & Allen, 1999; McCabe, Margolis & Barenbaum, 2001; Paris, 2003). There is little difference between the QRI-II and the QRI-3 reading inventories, both written by Leslie and Caldwell (1995, 2001).

Support for Use of the QRI as a Measure of Reading Ability.

Although there is research support for the use of IRIs, there is also disparity among both researchers and educators relative to the type of assessment that should be used to determine a student’s instructional reading level.

Cross and Paris (1987) suggested that researchers and educators assure that testing purposes and test properties match. The authors suggested that norm referenced tests may not be the best measures to use if the testing purpose is evaluation of a treatment condition. They indicated that the important test elements when using tests for evaluation are sensitivity to changes across time and construct representation. Construct representation means there is an assumption of underlying cognitive processing abilities measured by the test. Norm referenced tests designed to look for differences across groups often do not have the sensitivity or construct validity important for evaluation purposes (Cross & Paris, 1987). The QRI-3 is assumed by the authors to possess both because it is designed to provide opportunities to evaluate a student’s word recognition, oral reading, silent reading, retelling, and comprehension abilities using text chosen by the authors to represent actual text used in the classroom. To increase the construct validity of the QRI-3, the authors allow for “look-backs” as comprehension questions are being asked in all passages above Level 2. This skill more closely matches what students are required to do with text in school (Leslie & Caldwell, 2001).

Other studies also support research use of IRIs. In their evaluation of the Michigan Literacy Progress Profile (MLPP), Paris and his colleagues found that the QRI -3 as well as the Developmental Reading Assessment showed concurrent validity when scores from the Gates-MacGinitie Reading Test and the Qualitative Reading Inventory-3 were correlated. Correlations ranged from .48 to .90 (Paris, Pearson, Carpenter, Siebenthal, & Laier, 2002).

McCabe, Margolis, & Barenbaum (2001) correlated the QRI-II with the Woodcock Johnson Psycho-Educational Battery-Revised (WJ-R). They administered the QRI-II and The WJ-R one week apart in a counterbalanced order to 34 fourth-graders reading below grade three as determined by the Iowa Test of Basic Skills. Each WJ-R cluster score was correlated with instructional levels from the QRI-II. Statistically significant relationships were found between the QRI-II instructional reading levels and the WJ-R broad reading cluster ($r = .68$, $p < .01$), reading comprehension cluster ($r = .73$, $p < .01$), and the basic reading skills cluster ($r = .70$, $p < .01$). However, when each student's QRI-II and WJ-R scores were directly compared, at least 50% of the time, the WJ-R grade equivalents were higher than the QRI-II instructional scores by one or more levels. McCormick (1999) indicated that IRIs may result in reading levels closer to students' actual classroom performance levels, while norm referenced tests can inflate a student's actual instructional level (McCabe et al., 2001).

The ecological and construct validity of the QRI-3 became clearer through a series of studies attempting to assess the narrative comprehension of young children.

Paris and Paris (2003) designed a narrative comprehension (NC) task for 150 primary children using trade text. The NC task included retelling, comprehension measures and a picture walk. The NC measure was correlated either with the QRI-II or with the Michigan Literacy Progress Profile. Significant correlations were found between the QRI-II comprehension task and the NC retellings done with the trade text (r=.29, $p < .01$). In another of the studies, NC retelling measures correlated significantly with QRI-II retelling measures (r=.39, $p < .01$). The NC task also correlated significantly with QRI-II comprehension (r=.26, $p < .05$) (Paris & Paris, 2003). I highlight this study to indicate the ecological validity of the QRI-3.

The significant comprehension correlations indicate that the QRI-3 is a fairly accurate measure of classroom performance and assessment. Furthering the argument for ecological validity, early reading passages in the QRI-II are written to resemble passages found in basal readers, while upper level passages are taken directly from social studies and science textbooks and modified slightly (McCabe et al., 2001).

Because of the disparity in types of testing and because criterion referenced tests often present more construct validity, McCabe et al. (2001) suggest using the Criterion of the Least Dangerous Assumption (CLDA) (Donnelan, 1984). For example, if a student scores lower on an informal reading inventory than on a norm referenced test, than the lower level should be reported as the student's instructional reading level because there is less potential for harm in relation to the student's educational progress.

Finally, the authors indicate that serious consideration should be given to matching the testing task to the teaching task. For example, if students are required to read longer connected text in the classroom, then the QRI-II is a more valid measure of a student's actual ability to perform that task because it asks students to read lengthy passages and then answer questions whereas the reading comprehension passages on the WJ-R are relatively short (McCabe et al., 2001). Because students, and in particular high school students, are required to learn from lengthy text on a daily basis, I judged the QRI-3 to be a better assessment.

In the next section, QRI analysis is divided into three sections. In the first section, I provide details about the development of the QRI-3. In the second section, I describe how the QRI-3 was administered, and how that administration occurred with one child. The final section deals with assigning numeric scores to the QRI-3 passages for use in the statistical analysis to determine overall growth rates in my study.

QRI-3 development. Although the QRI-3 is a qualitative diagnostic tool, the authors took great care in its development. Word lists and oral reading passages were field tested with students across grade levels. Pilot tests were conducted for the original test and the following two reprints. Measures reported here as an example of the validation procedures are taken from the QRI-3 (Leslie & Caldwell, 2001). The sample used for validating the QRI-3 consisted of 267 children in first through ninth grades in both public and private schools. The sample also included children from both middle- and low- income schools and represented a racially varied population.

To insure that passages were of increasing difficulty, the authors divided passages into adjacent levels: Pre-Primer-Primer, Primer – One, One- Two, Two- Three, Three – Four, Four – Five, Five – Six, Six – Upper Middle School, and Upper Middle School – High School which were used to check for increasing difficulty. The researchers then conducted multivariate analyses of variance with readability as the between-subjects factor and total comprehension, retelling and reading rate as dependent measures. The authors conducted separate analyses for narrative and expository passages. They also analyzed passages on all adjacent levels.

Results indicated significant differences at each level. Readers performed better on the lower level than the higher level for at least some of the measures. Interscorer reliabilities for all passages were determined by three expert scorers.

The authors determined criterion validity by comparing total instructional level in the QRI-II with Total Reading scores on either the California Achievement Test or the Iowa Test of Basic Skills. Grades, correlations and numbers of subjects are as follows: Grade 1 ($r=.86$, $n=41$, $p<.01$), Grade 2 ($r=.65$, $n=32$, $p<.01$), Grade 3 ($r=.48$, $n=18$, $p<.05$), Grade 4 ($r=.66$, $n=31$, $p<.01$) Grade 8 ($r=.52$, $n=19$, $p<.05$). Criterion validity was the highest for grade 1, and tended to drop after grade 1. Criterion validity was lowest at the third and eighth grade levels.

Composition and administration of the QRI-3. The QRI-3 provides opportunities to evaluate a student’s oral reading, silent reading, and listening skills. It also assesses whether students are reading at grade level, and if not, at what level they would be able to read proficiently with instructional support. I conducted all June 2003 and January 2004 treatment and control administrations of the QRI-3 in a one-on-one situation, serving as my own control (Paris, 2003).

The QRI-3 has nine word lists containing 20 words per list. The lists are arranged in readability levels from pre-primer through high school. Each student read the word lists aloud, beginning with a word list approximately one year below the present grade level, or the level at which I believed the child to be functioning. The student continued pronouncing words in the lists until the student miscued or did not attempt five of the 20 words.

The QRI-3 contains both narrative and expository graded reading passages used to assess comprehension. The passages are arranged in readability levels from pre-primer through high school. Comprehension is evaluated through oral retelling and explicit as well as implicit questions provided for that passage.

The graded passages are rated as independent, instructional, and frustration based on student performance. At the independent level, the student can read successfully without assistance. At the instructional level, the student can read with assistance from a teacher. At the frustration level, the student is unable to read material with adequate word identification or comprehension. While the student is reading orally, the administrator counts and analyzes miscues in order to determine the student’s oral reading level of independent, instructional, or frustration.

Students followed the same procedure for all pre- and post- administrations. The student first read the title and made a prediction. I recorded predictions, but did not use them in my overall analysis because students were inconsistent as to whether they chose to make a prediction. As the student read, I recorded miscues and timed the passage for oral reading fluency. Students began post-testing at their most recent instructional QRI-3 levels, taken either from pre- or mid-point assessments. I describe the administration of the mid-point assessment later in this chapter.

Figure 15 shows the sequence of the different parts of the QRI-3 from beginning to end and indicates how the QRI-3 was scored. The 20 word lists are represented in the upper most box of Figure 3. The use of the oral reading passages branches. A single oral reading passage can be used both for the assessment of decoding as well as for assessing the student's level of comprehension. A student is placed in a graded passage based upon his/her score on the QRI-3 word lists.

The general approach used is to begin where the student is reading as fluently and with as high a comprehension level as is possible and move to the point where the student's reading level is deemed to be frustration (see Figure 12).

Figure 15 also indicates clear decision points within the administration of the QRI-3 regarding whether to stop or to continue administration. For example, if both oral reading miscues and comprehension questions indicate frustration, then I stopped administration. Students continued at the next QRI-3 level if both parts of the assessment were instructional or above. When students reached a level of frustration within the comprehension questions, I stopped administration. Figure 21 also shows an option for allowing students to use look-backs to answer comprehension questions. This approach more closely emulates the type of reading required in the upper grades. I evaluated all overall comprehension scores using look-backs. Once the student reached a frustration level in the oral reading passages, it was then possible to determine that student's current QRI-3 independent, instructional and frustration proficiency levels based on both comprehension and oral reading miscues.

Figure 16 shows how a single student moved through the administration of the QRI-3. The left hand column indicates the student's scores on the word lists. The student continued pronouncing words in the lists until seven of the 20 words were miscued or not attempted. The student began at Level 1 and received an independent score, so she moved on to the Level 2 word list. In this case, the student received a proficiency score of instructional. Therefore, I administered Level 3 to the student. Because the student's word list proficiency score at Level 4 was frustration, word list administration stopped.

I began oral reading passages two QRI-3 Levels below the student's Frustration Level word list. This student began her oral reading passages at Level 2. The student's progress through the oral reading passages is indicated in the second column of Figure 16 At Level 2 and Level 3, the student's combined oral reading miscue analysis and comprehension scores indicated a proficiency level of instructional. Therefore, I administered a passage at the next level. When the student's reading proficiency indicated frustration, I stopped administration. The student's oral reading proficiency level was in the QRI-3 Level 3 instructional range.

Figure 15

Composition of the QRI-3

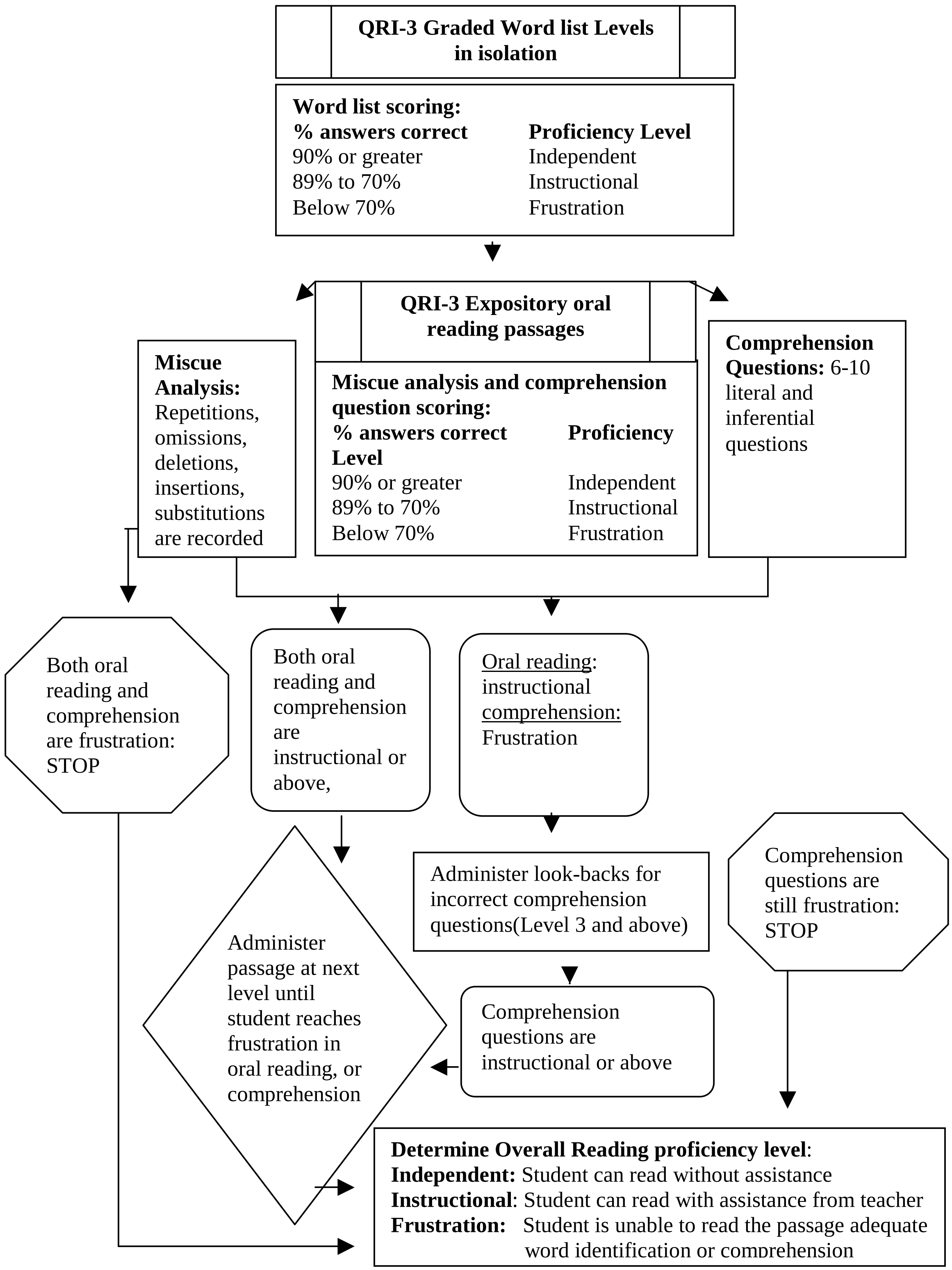
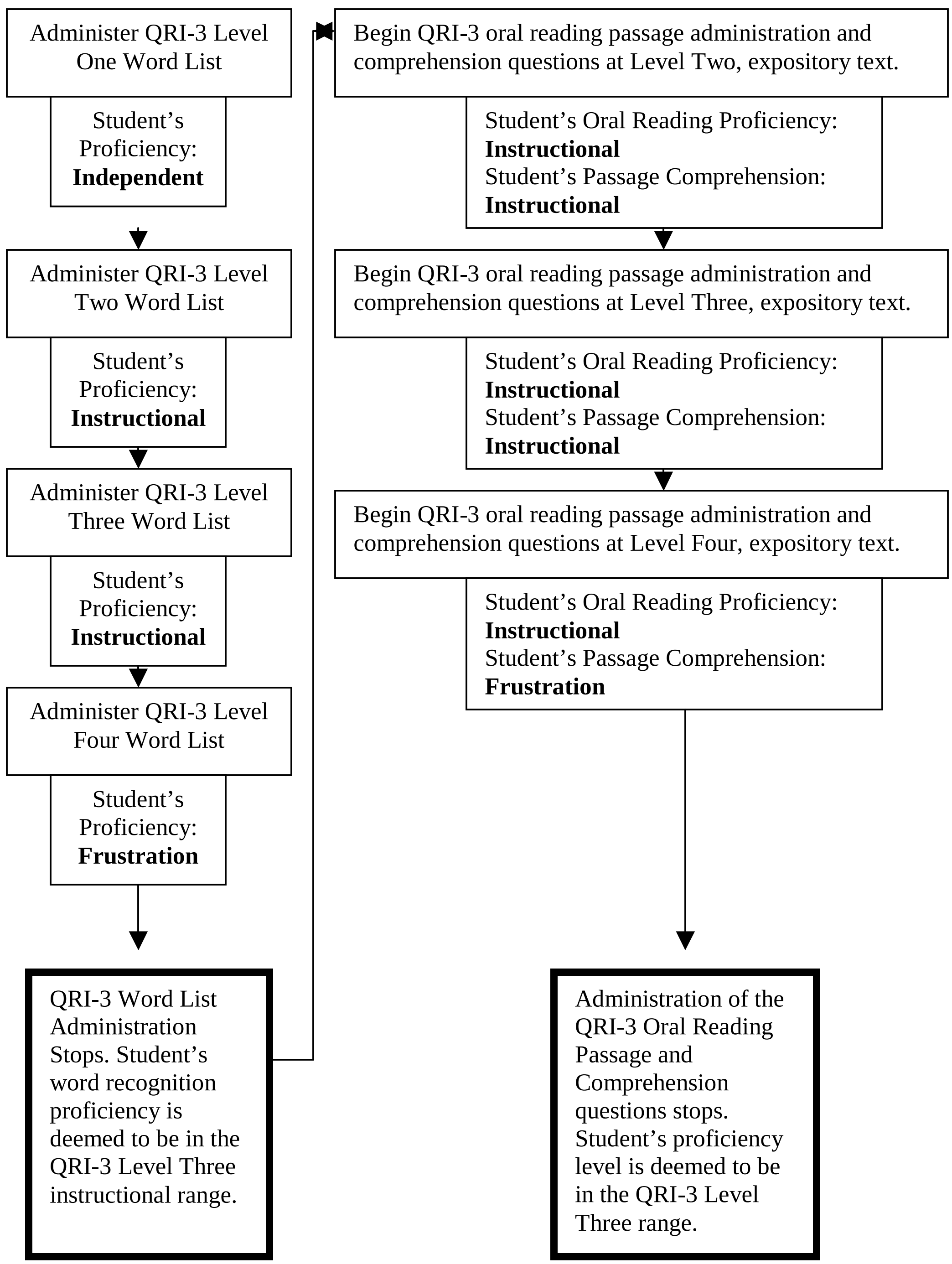


Figure 16

Flow Chart of QRI-3 Administration for One Student



Scoring of the QRI-3 word lists. During administration, the student looked at each word for two seconds. If she could identify it automatically, or self corrected at any time I gave the student credit for knowing the word. When the student reached frustration on the word lists, I stopped word list administration and began the oral reading passages.

Scoring of the QRI-3 oral reading passages. The QRI-3 contains many sub-components. In my study, I scored three of these components: oral reading miscue analysis, passage retellings, and comprehension questions. I did not score timed oral reading fluency. If a student was disfluent with a passage, I asked the student if she would like to stop the administration. If the student chose to continue reading, as some did, comprehension scores were too low for a student to be deemed at an instructional level.

As students read orally, I scored miscues to determine total accuracy of the passage. Substitutions, insertions, omissions of words, and appeals for assistance counted as errors. I recorded other miscues such as repetitions, self-corrections, pauses, and ignored punctuation, but did not count them as errors. I tallied miscues counting as errors and scored the passage according to the guideline in Table 6.

Table 6

Total Accuracy Scoring Guide for QRI-3 Oral Reading Passages

Total Accuracy
Independent Level: 98% accuracy
Instructional Level: 90% to 97% accuracy
Frustration Level: less than 90% accuracy

The QRI-3 provides opportunity for the student to retell a passage after the oral reading. I scored oral retellings, but adapted this scoring procedure for use in my study. I elaborate upon this later in chapter 3.

The comprehension questions are divided into two categories. Explicit questions are meant to be literal comprehension questions where the answer can be pulled directly from the text. Implicit questions are meant to require some type of inference, either across parts of text or between the text and the reader's background knowledge. QRI-3 passages contain anywhere from 6 – 10 comprehension questions. I used the comprehension question-scoring exactly as the QRI-3 indicates.

A student's overall reading level for passage administration is determined by combining the oral reading miscue analysis and comprehension scores. Table 7 indicates this scoring. For example, if the oral reading score is instructional, but the comprehension score is frustration, the overall reading level for that passage is at the frustration level. After the student reached a frustration level, I used the student's previous overall reading level, regardless of whether it was instructional or independent, for instructional placement as well as to determine growth over time. For example, if a student was frustrated in a level 4 passage, I determined that the student's overall reading level was at a QRI-3 level 3.

Table 7

Determining an Overall Reading Level for a QRI-3 Passage

Oral Reading Score	Comprehension Score	Overall Reading Level
Independent	Independent	Independent
	Instructional	Instructional
	Frustration	Frustration
Instructional	Independent	Instructional
	Instructional	Instructional
	Frustration	Frustration
Frustration	Independent	Instructional
	Frustration	Frustration

Passage selection. I selected passages for QRI -3 pre and post assessments based on four characteristics. First, because I was using only exposition during instruction, all QRI-3 passages were science passages. Many of the QRI-3 social studies passages are written in a more narrative style. Second, I chose passages at each level that were among the shortest because QRI-3 administration can be lengthy. I also chose passages without accompanying pictures to control for comprehension through picture-text match (Johnston, 2000). Finally, I considered reader interest. For example, at level 6, I chose *Predicting Earthquakes* over *Ultrasound* because I judged it to be of more interest. Table 8 is a list of the passages used with both the treatment and control groups.

Table 8

QRI-3 Passages Used

QRI-3 Level	Passage Title
Pre-Primer	*People at Work*
Primer	*Who Lives Near Lakes?*
First	*Air*
Second	*Whales and Fish*
Third	*Where People Live*
Fourth	*The Busy Beaver*
Fifth	*The Octopus*
Sixth	*Predicting Earthquakes*
Upper Middle School	*Fireworks*
High School	*Characteristics of Viruses – Part 1**

Note: * At the high school level, there are three passages within each topic. According to the QRI-3 administration instructions, they are to be administered simultaneously. Between each passage, the administrator is to conduct a think-aloud with the student. However, because of time constraints and to maintain consistency throughout the QRI-3 assessment sessions, I chose to use only the first part of *Characteristics of Viruses* and to administer it in the same fashion that all other passages were administered

QRI-3 text leveling control. Paris (2003) addressed QRI-3 passage validity and reliability. Because passage difficulty can vary within and across levels, administering different passages at pre- and post- testing to determine reading growth can be confounded, preventing the evaluator from determining progress. Paris (2003) suggested using the same passage at both pre- and post- testing provided the passages are administered at least three months apart to control for specific memory of the passage. This allows for increases in literacy ability to be attributed to the child without the confounding variable of passage difficulty. Paris (2003) also indicated that using the same passage at pre- and post- testing is as effective as any statistical method. Based on these suggestions, I chose to use the same passage at each administration. None of my QRI-3 administrations were less than three months apart. In this way, a student who scored at Level 4 during pre- or mid-point testing, began post-testing at Level 4 reading the same text.

Assigning scores for the QRI-3. Drawing upon the work of Paris (2003), I devised a continuous scale for the passages in the QRI-3. Each student received a numeric score for his or her highest instructional or independent level. I used these numeric scores to obtain statistical pre and post testing data. Placing the QRI-II or QRI-3 on a continuous numeric scale based on the obtained level to enable statistical analysis has research support (ie. Leslie & Allen , 1999; McCabe et al. , 2001). My scale is slightly different because I assigned a different numeric score for the same passage at both its instructional and independent levels to increase measurement sensitivity. I based this decision on Paris' (2002) discussion of determining literacy growth over time using the same passage. Table 9 indicates the numeric score corresponding to each passage level of the QRI-3. The first two Levels, Primer and Pre-Primer were scored as a .1 because I considered those students to be non-readers. A zero could not be used because I needed to multiply it to derive weighted scores.

Table 9

QRI-3 Continuous Numeric Scale

QRI-3 Passage Level	Assigned Numeric Score
Pre-Primer – Instructional	.1
Pre-Primer – Independent	.1
Primer – Instructional	.1
Primer – Independent	.1
Level 1 – Instructional	.5
Level 1 – Independent	1.0
Level 2 – Instructional	2.0
Level 2 – Independent	3.0
Level 3 – Instructional	4.0
Level 3- Independent	5.0
Level 4 – Instructional	6.0
Level 4 – Independent	7.0
Level 5 – Instructional	8.0
Level 5 – Independent	9.0
Level 6 – Instructional	10.0
Level 6- Independent	11.0
Upper Middle School – Instructional	12.0
Upper Middle School – Independent	13.0
High School – Instructional	14.0
High School – Independent	15.0

Investigation: Text Structure

Investigation: Text Structure had two sub-designs: A 2 (Treatment/Control) X 2 (Time) design using the QRI-3 retellings (N=40), and a within groups counterbalanced design using classroom based assessments (N=22).

Pre-post control design: QRI-3 retellings. For the pre- post control group design in *Investigation: Text Structure*, I used student retellings from the QRI-3 pre- and post-assessments. The QRI-3 provides an examiner-retelling sheet. To score student retellings, I numbered their stated idea units exactly as the students iterated them. I was then able to use the numbered idea units to assign a text structure score. I explain how retellings were scored in the section of this chapter entitled *Scoring Student Retellings and Summaries.*

There is some support for the use of the QRI-3 in text structure analysis. Paris and Paris (2003) used the QRI-II as an informal measure against which they could assess the robustness of a self-designed narrative measure. The researchers created little books for primary students based on a modified trade book containing a clear narrative story line. The researchers used an alternative scoring system based on narrative story structure. The children could receive as many as six points for the narrative elements of setting, characters, initiating event, problem, solution, and resolution/ending. The same children orally read two of the QRI-II graded passages. The researchers found significant correlations between the QRI-II retellings and the retellings from the spiral-bound little books ($r=.27$, $p<.05$), and between QRI-II comprehension as measured by the published comprehension questions, and the spiral-bound little book retellings ($r=.29$, $p<.01$). These correlations might indicate that the use of well-structured trade text could allow students to transfer text structure knowledge from task to task. Because my study assessed text structure in two ways, classroom based assessment following the reading of trade books and QRI-3 retellings, the methodologies are similar.

Within groups counterbalanced design: Classroom based assessments. Similar to the work of Brown and Palinscar (1984), I collected classroom data via a weekly teacher-made classroom based assessment (CBA). Each week, every class in the instruction group took the assessment. Over the course of 18 weeks, I collected 396 assessments. The structure of the CBAs remained the same throughout the study and was similar in nature to other classroom-based assessments. There were three multiple choice questions: a literal question, an inferential question, and a text structure question. An open-ended question always asked students to write a short summary of the text. Students were not permitted to talk during the CBA but were allowed to use the text. Allowing students to use texts more accurately reflected my goal of teaching students to negotiate exposition as opposed to memorizing facts. Figure 17 is a sample CBA. Most students took all of the CBA's accompanying each text with two exceptions. The second language students who began the program below a QRI-3 Level 1 took a few CBA's based on texts from the Early Emergent Stage (Steck-Vaughn, 1998), and only students who began at a QRI-3 Level 4 took CBA's from the Maryland text.

Figure 17

Sample of Weekly Classroom Based Assessments

Storms

1. How fast do winds in a hurricane blow?

    a. 70 miles per hour
    b. faster than a bullet train
    c. 100 miles per hour

2. Why can't you see during a blizzard?

    a. the snow gets in your eyes
    b. there are heavy winds
    c. the snow and wind together form a giant white sheet.

3. The explanation on page 4 of how thunderstorms form is an example of:

    a. compare and contrast
    b. topical net
    c. cause and effect

4. In your own words, write a brief summary of what you have just read.

Scoring rubric for locating structure in student retellings and summaries. Using a rubric system for scoring global structure in text is well documented in the research. Chambliss (1990) and Chambliss and Murphy (1995) used such a system to score argument structures. Chambliss, Christensen, and Parker (2003) scored student's abilities to create explanations. Brown et al., (1983) used two separate rubrics, one for looking at the importance of idea units and one for looking at paraphrasing skills versus verbatim recall. For this study, I created a rubric applicable to all of the text patterns in the Chambliss and Calfee (1998) model, requiring yet another level of abstraction. It also had to be sensitive enough to determine students' varying levels of text processing (Brown et al., 1983). I know of no other research where this has been done. Drawing upon previous research and theory, I created a rubric that would encompass all types of structures while still allowing me to judge the structure of the student's representation.

My rubric had to take into account two levels of representation. Kintsch (1998) indicated that the highest level of abstraction would consist of a concise summary representing the overall global structure of the text. Chambliss (1990) pointed out that separate paragraphs may contain structures different from the overall global structure. Further, Brown et al. (1983) and Winograd (1984) contended that older students with better processing strategies were able to incorporate both types of information into a relatively concise summary. A student summary with both types of structure indicated that the student had learned how to analyze text at both levels.

Finally, some students included in their summaries actual references to the structure of the text, such as *"This book is a linear string of the history of Maryland."* While this may not be considered a typical summary, it does highlight the student's thinking. In order to come to such a conclusion, she is integrating a number of cognitive and metacognitive strategies (Brown et al, 1983), such as linking task knowledge and text knowledge and metacognitively going beyond a written global structure to a higher level of abstraction (Gallimore & Tharp, 1990; Vygotsky, 1978). In his study, Winograd (1984) used the term *inventions* to discuss places where students had conveyed the gist of an entire text in a single sentence.

In my rubric, I termed this type of student summary writing meta-discourse. Meta discourse in speech helps the reader to connect and organize material for interpretation (Van de Kopple, 1997). While not classically defined in taxonomies, I surmised that student writing about the rhetorical pattern itself was a form of meta-discourse because the student is writing about thinking. In these cases, students were not conveying topic-centered material. They were conveying their knowledge of how the author organized the text (Steffensen & Chang, 1996; Van de Koppple, 1997). Figure 18 shows the scoring rubric.

Figure 18

Retelling and Summary Scoring Rubric

<u>Both global and sub- structures can be represented in one of 2 ways:</u>

**Concise summary indicating overall hierarchical relationship of global structure*
* *Meta-discourse* (this chapter was a linear string about the history of Maryland)

These 2 ways can be applied to a rubric as follows:

Level 11: Represents entire global structure of text in one of the 2 ways plus a complete sub structure of the text in one of the same 2 ways.

Level 10: Represents entire global structure of text in one of the 2 ways plus a partial sub structure of the text in one of the same 2 ways
Level 9: Represents entire global structure in one of the2 ways. No sub-structures are mentioned.

Level 8: Represents part of the global structure in one of the 2 ways listed above plus a complete sub-structure in one of the 2 ways.

Level 7: Represents part of the global structure in one of the 2 ways. Plus a partial sub-structure in one of the 2 ways.

Level 6: Represents part of the global structure in one of the two ways: no sub structures

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Level 5: General Topic Mention plus complete sub structure in one of the two ways

Level 4: General Topic Mention plus partial sub structure in one of the two ways

Level 3: General Topic Mention Alone

Level 2: Represents a complete sub-structure in one of the 2 ways.

Level 1: Represents a partial sub-structure in one of the 2 ways.

Level 0: no global or sub-structural relationships are evident, and/or summary represents incorrect content.

Using the retelling and summary rubric to assign scores. For the pre- and post-control group design, student retellings were used to determine how much of the structure they were incorporating in their QRI-3 retellings. QRI-3 retellings were scored for both the treatment and control groups to determine if differences existed.

For this analysis, I chose to use raw rubric scores rather than to weight the scores by text level for three reasons. First, recognizing rhetorical patterns in text represents a thinking skill, and I was attempting to capture the student's levels of abstract thinking independent of reading level. Second, most text leveling systems do not consider text structure when texts are leveled. Third, it is entirely possible that texts with easier readabilities could possess complex structures. Such an example is indicated in Figure 28, where the Storms text is written at a very low level but contains argument and falling dominoes structures within a topical net.

The QRI-3 provides a retelling checklist that propositionalizes each idea unit from the text. As students were retelling the QRI-3 passage, I numbered their idea units exactly as they were stated, regardless of whether or not the retelling was out of order. I used the idea units beside each number to create a text graph based on the Chambliss and Calfee model (1998) in the exact order of the retelling. Numeric order of the retelling was critical because it was the only indicator of the presence or absence of rhetorical patterns. I scored the retellings using the Retelling and Summary Scoring Rubric shown in Figure 18.

Figure 19 is an example of a student's graphed and scored retelling for the passage about air. The first section in the figure shows how the retellings were marked on the QRI-3 retelling guide. The second section of the figure shows how I graphed the students' retelling.

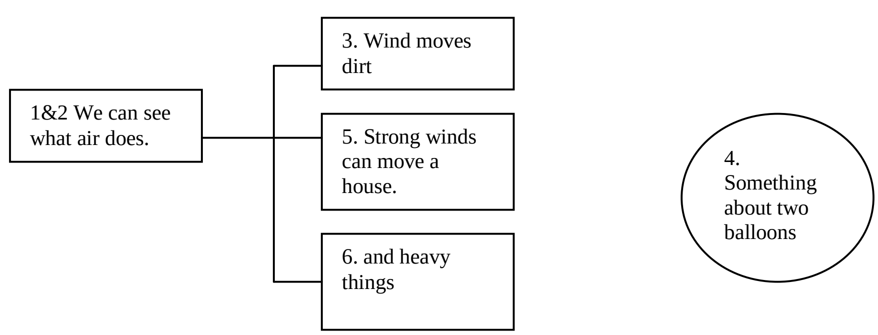
Figure 19

Graphing and Scoring Example for a QRI-3 Retelling of Air

<u>Second Retelling for Air:</u>

_Air is all around us
_but we can't see it.
_how do we know it is there?
1 We can see
2 what air does.
_ Moving Air
_is called wind.
_Wind moves <u>plants</u>.
3 Wind moves dirt.
6 Strong winds can move heavy things. (and)
5 Strong winds can move a house.
_We can weigh air
_We can weigh
4 two balloons (something about)
_The one with lots of air weighs more
_ We can see what air does.
_ we can weigh air
_Then we know it is there

Graph of Retelling



Using the rubric in Figure 18, the student had a partial global structure, placing her summary in the 6-8 range. The claim about seeing what air does is present and is followed up with evidence. The second claim about weighing air is missing. Because the student represented no sub-structures, her overall score was a 6.

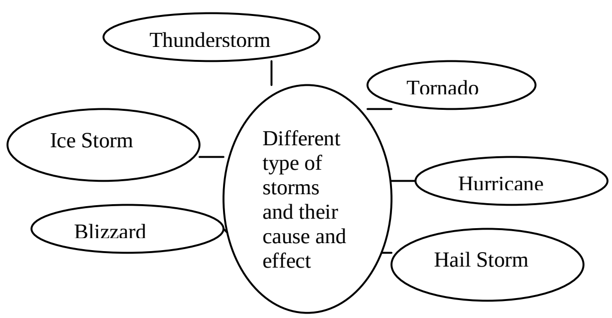
I used a similar procedure to assign scores to the student summaries from the CBAs to determine the differences between groups for the crossover design. Prior to assigning a rubric score, I graphed each CBA summary according to the Chambliss and Calfee (1998) model so that it could be compared to the expert graph of each text. Figure 16 shows a student summary of the storms text and how it was graphed.

Figure 20

Student Summary and Text Graphing

I read about different types of storms and their cause and effect. Like thunderstorm, tornado, hurricane, hail storm, blizzard and ice storm.

<u>Graphed summary</u>



In this example, I first decided that the student was representing the entire global structure, placing her summary in the 9-11 range. Then I decided that because she mentioned cause and effect, she would receive full credit for a sub-structure via metadiscourse. Some of the paragraphs for storms are presented in the text in a cause and effect fashion. Her score on the rubric would be an 11, for a full global structure plus a full sub-structure.

Interrater reliability for QRI-3 retellings. An outside rater who is an expert in the field agreed to rate student's retellings. I first trained the rater on the Chambliss and Calfee model (1998). I then trained the rater in understanding the rubric using text graphs and QRI-3 retelling sheets from parallel passages in the QRI-3. The rater practiced scoring a few sample retellings independently. Finally, I trained the rater on each of the four QRI-3 passages she was to rate using the text graphs I had created. I worked with the rater until I was sure that she understood the rubric, the QRI-3 text graphs, and how to score the summaries by graphing and comparing them to the expert's graph. This training lasted approximately 60 minutes.

Retellings used for interrater reliability were chosen purposefully. I wanted to assure that retellings from both the treatment and control groups were rated. Second, I wanted some pre- and post- retellings from the same students in both the treatment and control groups to help control for researcher bias. Therefore, I had to use three lower passages, because students in the control group never read the upper level passages. I used the Primer passage, the Level 1 passage, and the Level 2 passage. I needed to have one more passage independently scored to capture retellings that the instruction group students gave at post-testing, so I added the upper middle school passage. A total of 42 out of 80 retellings were scored (52%). Table 10 below indicates how many passages at each of these levels were scored and whether or not they were pre or post retellings. From the instruction group, raters scored 18 of 22 student retellings. From the control group, raters scored 10 out of 18 retellings. Eight students each in both the instruction and control groups had both pre- and post- retellings independently scored. Interrater reliability for this measure was 99%.

Table 10

Retellings Scored by Outside Rater

Passage	Treatment Group		Control Group	
	Pre	Post	Pre	Post
Primer	5	0	4	2
Level 1	6	0	4	2
Level 2	3	0	2	5
Upper Middle School	0	13	0	0

Interrater reliability of CBA summary scores. Summaries for interrater reliability were chosen purposefully. First, I wanted to use texts about which all students had written summaries. I also wanted each of the texts scored by an outside person to have a different global structure. All texts meeting these requirements came from the middle of the series. Table 11 indicates the text title, the number of students writing a summary, and the global structure of the text.

Table 11

Texts Used for Summary Scoring Reliability

Title of Text	N	Global Structure of Text
A Look at Spiders	22	Topical Net to Inform
Animals in Danger	22	Hierarchy to Argue
Explorers	22	Linear String to Inform
A Forest Community	22	Matrix to Inform

An expert rater, trained as a Reading Recovery teacher and familiar with the Chambliss and Calfee (1998) model, agreed to score the student summaries. The training was identical to that of the training for the rater who scored the QRI-3 summaries, except that I used the *Animal Homes* classroom text and accompanying student summaries to train the rater. This training took approximately 60 minutes. The rater independently scored 88 of the 396 student summaries (22%). Interrater reliability was 94%.

Evaluating the Content of Student Summaries.

While my study focused mainly on text structure, evaluating the content of the students' summaries was important. If text-structure instruction is seen as a valid comprehension strategy, then determining whether students gained content knowledge or vocabulary through the text structure instruction was also of value

Content word counts. To determine any differences between the TS 1 and TS 2 groups in conceptual knowledge gained, I conducted a content word count of each

student summary. Because Brown, Day and Jones (1983) and Winograd (1984) found that students who were better at integrating cognitive processing activities were able to relate more of the content of the text using fewer, but key, words, I chose to use a straight content-word count, counting each technical vocabulary word only once, instead of a typical T-Unit analysis (Hunt, 1965). I found that some of the best summaries were from the more advanced students and were the shortest in length, congruent with these findings. Succinct summaries would have been underestimated by T-unit scoring. On the other hand, T-units do not address recursive writing where identical ideas are mentioned more than once in a summary, a common problem among second language and learning disabled writers
(Sturm & Rankin-Erickson, 2002; Wojanasinski, & Smith, 2002).

Scoring content words. To allow for text difficulty, I assigned a numeric weight to each text in order of difficulty identified by the publisher. This allowed all summaries to be scored based on the increasing difficulty of the text. Table 12 below indicates keywords from each text and the text weight.

Table 12

Keywords from the Text Title and Assigned Text Weight

Text	Weight
Early Emergent	
Sports are fun	.1
Frogs	.2
Where do bugs live	.3

Emergent Stage 1

Bats	1.1

Emergent Stage 2

Who lives in the woods	2.1
Season to season	2.2
Great white sharks	2.3
Beach creatures	2.4
Wolves	2.5

Early Fluency Stage 3

Pizza for everyone	3.1
Farm life long ago	3.2
Animal homes	3.3
A pet for you	3.4
Lions	3.5
Amazing trains	3.6
Storms	3.7

Early Fluency Stage 3 – chapter books

A look at dogs	4.1
Japan	4.2
A look at spiders	4.3
A look at snakes	4.4
Corn: An American Indian gift	4.5

Fluency Stage 4

Gail Devers: a runners dream	5.1
Animals in danger	5.2
Life in the desert	5.3
Explorers	5.4
Take care of our earth	5.5

Proficiency stage 5

A forest community	6.1
Think like a scientist	6.2
Fantastic animal features	6.3
Fossils	6.4
Ocean life, tide pool creatures	6.5
Pioneer way	6.6
Natures power	6.7

Proficiency stage 6

Musicians and their music	7.1
Underground railroad	7.2
Ecosystems	7.3

Independence

Maryland	8.1

To arrive at a weighted content score, I multiplied word counts from each summary by its text level. These weighted content scores were used in the statistical analysis. Figure 21 is an example of how a student's summary was scored. Each underlined word was considered a content word.

Figure 21

Example of Content Word Scoring

I read about <u>different</u> <u>types</u> of <u>storms</u> and their <u>cause</u> and <u>effect</u>. Like <u>thunderstorm</u>, <u>tornado</u>, <u>hurricane</u>, <u>hail storm</u>, <u>blizzard</u> and <u>ice storm</u>.

11 (Total Content Count) x 3.7 (Text Weight) = 40.7 (Total Content Word Score)

Interrater reliability for content words. The same expert rater who scored student summaries also completed word counts on the same four texts. I gave the rater a 20 minute training session to explain how to score content words in summaries, the four texts, and the actual student summaries. Initial exact reliability was only 31%. When adjacent scores were included, meaning that the rater's content word count for a summary was only one number different from my word count, total reliability across both adjacent and exact matches was 97%.

Assigning scores: CBA multiple choice questions. Recall that there were three separate multiple choice questions on each CBA: one literal, one inferential, and one text structure. Each literal, inferential, and text structure multiple choice question received a score of either 0 or 1. A correct answer received a 1 and an incorrect answer received a 0. I used these scores in the statistical analysis to determine what effects text structure might have had on student's abilities to respond to literal, inferential and text structure questions.

Investigation: Motivation.

Because literacy attainment and motivation have been closely linked, I administered the Motivation for Reading Questionnaire (MRQ) to determine any within treatment group differences from the beginning to the end of the instruction. I used a pre – post treatment design only because I was not able to administer the MRQ to the control group at pre testing. *Investigation: Motivation* was done with instruction group students only (n = 22).

Motivation for Reading Questionnaire. The Motivation for Reading Questionnaire (Wigfield et al., 1996) measures growth on motivational outcomes in 11 areas: Reading Efficacy, Reading Challenge, Reading Curiosity, Reading Topics Aesthetically Enjoyed, Importance of Reading, Reading Recognition, Reading for Grades, Social Reasons for Reading, Competition in Reading, Compliance, and Reading work Avoidance. The MRQ is a 54 item questionnaire designed on a four point Likert scale.

Although students took the entire MRQ, I only used two of the MRQ sub-scales in this study: Reading Efficacy and Reading Challenge. Reading Efficacy is defined as the belief that someone holds that s/he can be successful at reading. Reading Challenge is the satisfaction of mastering complex ideas in text (Wigfield et al, 1996). Figure 22 indicates student directions given at the top of each page and two sample questions from reading challenge and reading efficacy.

Figure 22

Directions and Sample Questions from the MRQ

Directions

Circle one answer for each question Using these answers.	1. Very different from me 2. A little different from me 3. A little like me. 4. A lot like me.

MRQ Scale	**Sample Question from that Scale**					
Reading Efficacy	I am a good reader	1	2	3	4	5
	I know that I will do well in reading next year	1	2	3	4	5
Reading Challenge	I like hard, challenging books	1	2	3	4	5
	If the project is interesting, I can read difficult material.	1	2	3	4	5

In my study, I used the MRQ for two reasons. First, there are very few motivation scales to measure the linkages between reading and motivation specifically (Wigfield et. al., 1996). Second, researchers who study reading motivation and who have empirically tested the MRQ with groups of elementary school children created the MRQ.

The authors developed the MRQ from a solid research base in both studies of general and literacy motivation. Consequently, the scales listed above were developed as a set of constructs stemming from what the authors thought might be the dimensions of reading motivation. From there, the authors developed questions within each construct to measure each of the dimensions of reading. Construct reliabilitiy for each scale was measured in the fall and spring of the MRQ's developmental administrations. The authors state that reliabilities across the constructs range from adequate to good, with .70 being optimal. Table 13 shows the reliabilities for the Reading Efficacy and Challenge Scales.

Table 13

Spring and Fall Reliabilities for the Reading Motivation Scales (Wigfield et. al, 1996)

Scale	Fall	Spring
Reading Efficacy	.63	.69
Reading Challenge	.68	.80

Although the MRQ was tested with elementary school children, I hypothesized that it remained appropriate for ninth grade poor readers. The MRQ requires the examinee to be highly reflective of his or her own reading ability. Because of the developmental nature of abstract cognitive thinking, I posited that older students might be better able to answer the questions posed on the MRQ.

MRQ administration. I administered the MRQ in its entirety to each reading class in the treatment group. Pre-testing occurred in August 2003 prior to any instruction. Post-testing occurred in January 2004 after instruction was completed. All students took the MRQ in the exact same way. Because reading levels varied, I read each question aloud to each class, with one exception. Second language students sometimes translated meanings of questions for each other at pre-testing. At post-testing, they were proficient enough in English that this was not necessary. Directions for the Administration and Scoring of the

MRQ, the questions accompanying each scale, and the instrument itself, can be found in Appendix I.

In this study, I was only interested in internal motivating factors that best aligned with the Competence Support Theory (Wigfield, Guthire, & VonSecker, 2000) Therefore, I did not use those MRQ scales I deemed to be more highly attributable to external sources of motivation. The scales I eliminated for this reason were:Compliance, Reading Recognition, Reading for Grades, Social Reasons for Reading, Reading Competition, Reading Work Avoidance. That left five scales that might fit my study. I omitted Importance of Reading because that scale has only two questions and my number of participants for this part of the study was quite small (n=22). The Aesthetic Enjoyment scale did not fit my study because in my framework, student choice is limited and the questions do not align with the idea of Competence Support. The same was true for the Reading Curiosity scale. Choice of topic was not a major factor in my study. Topic choice was guided by the texts I felt were at the student's appropriate reading level.

That left two MRQ scales: Reading Efficacy and Reading Challenge. I deemed both scales to be measures of internal motivation and therefore aligned better with the idea of Competence Support. I wanted to know whether the instruction improved students' beliefs in themselves as readers and if this improvement led to student motivation for tackling new reading challenges. I computed the standard scores for these two scales only and used them for the statistical analysis.

MRQ scoring. Following the MRQ scoring instructions, I obtained standard scores on the Efficacy and Challenge scales. The Likert scale scores are added together and divided by the number of questions within that MRQ scale. For example, on the

Reading Importance scale, there are two questions. A child circles a 3 for one question and a 4 for another question, giving her a raw score of 7. Seven is then divided by 2 for the two questions on the scale, giving her a scale score of 3.5. This process of standardizing each MRQ scale score means that all MRQ Scale scores will have a range of 1-4.

Conclusion

Chapter 3 described the methods and procedures used in this study. The overall research design was an experimental pre-post- control group design. This design was used in *Investigation:Literacy Growth.* Forty students participated in this investigation; 22 were assigned to the treatment group and 18 were assigned to the control group. *Investigation: Text Structure* had two sub designs. The first was a within groups counterbalanced design, measured by teacher-made classroom based assessments. Twenty-two students in the intervention group participated in this design. The second sub-design for *Investigation: Text Structure* was a pre-post control group design using QRI-3 retellings. Forty students participated in this investigation, 22 from the instruction group and 18 from the control group. *Investigation: Motivation* had a pre-post treatment group only design using the Reading Challenge and Reading Efficacy scales from the Motivation for Reading Questionnaire (Wigfield, Guthrie, & VanSecker, 2000). Twenty-two students from the instruction group took the MRQ. Chapter 4 reports the results from this study.

Chapter 4

Results and Discussion

This study explored three separate hypotheses. First, I explored the effect of the framework of cognitive challenge in appropriate text for rapidly accelerating the literacy growth of ninth grade struggling readers across gender and school services. I have labeled this facet of the study *Investigation:Literacy Growth*. Second, I explored the effects of direct instruction in text structure on the negotiation and comprehension of expository text. I labeled this piece *Investigation: Text Structure*. Finally, I considered what effects the instruction may have had on students' intrinsic motivation for reading efficacy and reading challenge. I labeled this part of the study *Investigation: Motivation*. The remainder of this chapter reports results for each of the three investigations.

For each investigation, I used an Analysis of Variance. Within each sub-section, I report on the type of ANOVA used to analyze the corresponding data. Because of the number of tests run in this study, I conducted all statistical tests at the .01 level of significance to guard against type I error. Because there were unequal cell sizes for the treatment and control groups, gender, and school services, Type III sum of squares was used for all analyses throughout the study, considering variance unique only to the effect in question. Levene's test for homogeneity of variance was also met in all cases.

Because sample sizes used in this study are relatively small, in each ANOVA table, I also report post-hoc observed statistical power. Huck (2004) indicates that ideal observed power approaches .8. For some of my analyses, power was quite close to 1.0, indicating that there was more than sufficient power to detect an effect that was, indeed present, and to assure that a Type 1I error would not occur. In general, I did not find observed power to be an issue. Power analyses went as low as .7 for the analysis of motivation and for the text structure multiple choice questions. Otherwise, observed power remained at .8 or higher. Across all analyses, sphericity was not an issue because the assumption of sphericity was either met, or the inferential statistics using Huynh-Feldt correction equaled those used when sphericity was assumed. In cases where the assumption of sphericity was not met, I report the corrected model.

Investigation Literacy Growth: Results

Qualitative Reading Inventory-3: Pre-Post Control

My initial research question for *Investigation: Literacy Growth,* was designed to determine whether or not the framework of challenging task in appropriate text would have any affect on students' overall reading levels. I hypothesized that the instruction, which provided a combination of word study and comprehension strategy instruction in appropriate text, and built on the students' current cognitive skill delivered at point of need, would contribute to accelerated literacy growth as compared to a control condition. I further hypothesized that this instruction would be equally effective for students across gender and school services.

Initial Differences in Groups

I performed a one-way analysis of variance (Group: Treatment/Control Condition) X (Pre- QRI-3 Level) to determine if there were any initial differences in the reading levels of the treatment and control groups. Table 14 indicates that no significant differences were found between the treatment and control groups based on QRI-3 incoming reading levels ($F(1, 38) = .046$, $p > .01$).

Table 14

ANOVA for Grouping Measures by Treatment Condition

Source	*df*	*ms*	*F*	*p*
Between	1	0.380	0.046	0.832
Error	38	8.322		
Total	39			

I also performed a one way ANOVA (Gender) X (Pre-QRI-3 Reading Level) to determine if there were differences among reading level by gender. Table 15 indicates that there were no significant differences in incoming reading level by gender. (F (1,38)= .111, p.> .01)

Table 15

ANOVA for Grouping Measures by Gender

Source	*df*	*ms*	*F*	*p*
Between	1	0.919	0.111	0.741
Error	38	8.308		
Total	39			

Finally, I performed a one way analysis of variance (School services) X (Pre-QRI-3 Reading Level) to determine if there were any differences among incoming reading level by students who were receiving special education services or ESOL services and those who were not. Table 20 indicates that there were initial differences among students who were and were not receiving services ($F(1, 39) = 32.660$, $p. < .01$). Table 16 reports the means and standard deviations for students in both groups receiving services or not. Table 17 indicates that differences did exist among those students receiving services and those students not receiving services when the ANOVA was performed ($F(1,39) = 32.660$, $p. < .01$). Initially, students in the study who were receiving no services had higher incoming reading levels than students who were receiving special services, regardless of whether they were special education or ESOL services. This is not an unusual finding. I expected that students receiving services of some type would have lower initial reading levels than those students who were not receiving services.

Table 16

Means and Standard Deviations for Incoming Reading Levels by Grouping

Factor	Mean	Standard Deviation
	Mean	Standard Deviation
Group	1.050	0.814
Services		
No Services	5.833	1.585
Special Education	1.250	2.069
Second Language	0.664	1.548
Services by Group	Mean	Standard Deviation
No services		
Instruction Group	5.750	1.585
Control Group	6.000	1.982
Special Education		
Instruction Group	0.550	0.736
Control Group	1.775	2.613
Second Language		
Instruction Group	0.250	0.207
Control Group	1.216	2.351

Table 17

ANOVA for School Services by Incoming Reading Level

Source	*df*	*ms*	*F*	*p*
Between	1	101.065	32.660	0.000
Error	38	3.094		
Total	39			

Results: Investigation: Literacy Growth

My primary measure for this design was the students' overall reading level as determined by the QRI-3 and placed on a continuous numeric scale. The design was a fully-crossed 2 (Treatment/Control) x 2(Gender) X 2 (Time: QRI-3) X 3 (School Services) mixed design with time of reading assessment (Time:QRI-3) was the within-subjects factor. All other factors were between-subjects. Table 18 indicates the between and within subject factors in this design and the corresponding levels of those factors.

Table 19 reports means and standard deviations for group, gender, services, time and interactions. Scores were derived by placing the student's highest QRI-3 reading level on a continuous scale. This scale is reported in chapter 3. For example, if a student's highest pre QRI-3 reading level was Instructional Level 4, her scale score was a 6.0. This scale aligned a numeric score to each QRI-3 level at both the Instructional and Independent scoring options within that level. The QRI-3 overall reading level also took into account both a miscue analysis score as well as a score for comprehension questions. Table 20 reports the results of the analysis of variance.

Table 18

Within and Between Subjects Factors for Investigation: Literacy Growth

Factors		Levels
Between		
	Groups	Instruction Group
		Control Group
	Gender	Male
		Female
	School Services	No Services
		Special Education
		English as a Second Language
Within	Time	Pre- Instruction Assessment (QRI-3)
		Post-Instruction Assessment (QRI-3)

Table 19

Means and Standard Deviations for Reading Levels on the QRI-3

for Group, Gender, Services and Time

Between-Subject Factors		Mean	Standard Deviation
Group			
	Instruction	15.3733	4.968
	Control	7.962	5.372
Gender			
	Male	9.126	2.916
	Female	12.984	4.575
Services			
	No Services	16.916	4.209
	Special Education	7.764	5.989
	Second Language	7.400	5.865

Within-Subjects Factors		Mean	Standard Deviation
Time: QRI-3			
	Pre	2.420	2.849
	Post	7.962	5.372
Group by Time			
Pre: QRI-3	Instruction	2.331	2.909
	Control	2.527	2.854
Post: QRI-3:	Instruction	12.045	2.869
	Control	2.972	2.909
Gender by Time			
QRI-3 Pre for Males		2.314	2.916
QRI-3 Post for Males		6.814	5.613
QRI-3 Pre for Females		2.638	2.806
QRI-3 Post for Females		10.346	4.048

Gender by Group by Time			
Males			
Pre:QRI-3	Instruction	2.370	2.475
	Control	1.928	2.677
Post:QRI:3	Instruction	11.615	3.640
	Control	2.357	2.519
Females			
Pre:QRI-3	Instruction	1.755	2.475
	Control	4.625	2.750
Post:QRI:3	Instruction	12.666	3.640
	Control	5.120	3.244
Services by Time			
QRI-3 Pre/No Services		5.833	1.585
QRI-3 Post/No Services		11.083	3.848
QRI-3 Pre/ Special Education		1.250	2.069
QRI-3 Post/ Special Education		6.154	5.563
QRI-3 Pre/ Second Language		0.664	1.548
QRI-3 Post/ Second Language		6.735	5.497
Services by Group by Time			
No Services			
Pre:QRI-3	Instruction	5.750	1.982
	Control	6.000	0.000
Post:QRI-3	Instruction	13.625	1.060
	Control	6.000	0.000
Special Education			
Pre:QRI-3	Instruction	0.550	0.736
	Control	1.755	2.613
Post:QRI-3	Instruction	12.333	0.816
	Control	2.150	2.493
Second Language			
Pre:QRI-3	Instruction	0.250	0.207
	Control	1.216	2.351
Post:QRI-3	Instruction	10.250	4.062
	Control	2.050	3.059

Note. Range for QRI-3 reading levels: .01 – 15.0. See Table 10 in Chapter 3 (p. 132).

Table 20

ANOVA table for QRI-3 Levels by Treatment Condition, Gender and Services

Source	*df*	*MS*	*F*	*p*	*Observed Power*
Between-Subject					
Group	1	145.632	25.577	.000	.985
Gender	1	25.156	4.418	.045	.275
Services	2	60.641	10.650	.000	.910
Group Gender*	1	26.528	4.659	.040	.293
Group Services*	2	6.380	1.120	.340	.080
Gender Services*	2	26.947	4.733	.017	.408
*Group*Gender* Services*	2	3.257	0.572	.571	.039
Error	28	5.694			
Within-Subject					
Time:QRI	1	405.370	201.441	.000	1.0
*Time:QRI * Group*	1	331.311	164.639	.000	1.0
*Time:QRI * Gender*	1	2.955	1.468	.236	0.076
*Time:QRI*Services*	2	6.282	3.122	.060	0.294
*Time:QRI*Group* Gender*	1	1.341	0.666	.421	0.036
*Time:QRI*Group* Services*	2	3.895	1.936	.163	0.158
*Time:QRI*Gender* Services*	2	2.538	1.261	.299	0.092
*Time:QRI*Group* Gender* Services*	2	0.292	0.145	.865	0.016
Error (Time)	28	2.012			

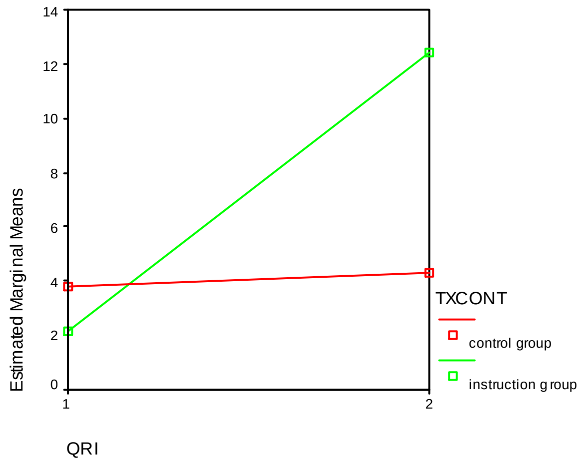
Note: Observed power is computed by SPSS based on observed values and calculated at alpha = .01.

Analysis of investigation: Literacy growth. Some very clear results emerged from this analysis. The left hand column of Table 34 indicates the between and within subject factors and their levels as well as interactions. The row headings show the corresponding means and standard deviations for each between and within subjects factor as well as for interactions. The ANOVA table shows all corresponding inferential statistics.

Between the instruction and control groups, a meaningful difference in the means was observed ($F(1,28) = 25.577, p<.05$). Students who were receiving school services came into the instruction with much lower QRI-3 scores than those students who were not receiving services. What is important to note here is that the students in the treatment group who were receiving services were able to improve their reading levels to the extent that the initial gap between students receiving services and those receiving none began to close. While these findings are quite interesting, it is only by examining the interactions that the effects of instruction become clear. Means for the group by time interaction indicated that all students were relatively equal in reading level at pre testing. However, the means at post testing show a considerable difference between the instruction and control groups. This difference was statistically significant ($F(1,28) = 164.639, p<.01$), supporting my hypothesis that students in the instruction group would be able to increase their literacy abilities. The line graph in Figure 23 shows this interaction. While the control group entered and exited the study at approximately a QRI-3 Instructional Level 3, the treatment group entered the study at approximately a QRI-3 Instructional Level 2 and finished the study at approximately a QRI-3 Instructional Level : Upper Middle School.

Figure 23

Group by Time: QRI Interaction



The distribution of incoming and final raw QRI-3 scores make this interaction more interpretable. They indicated that students who received the intervention were able to improve their reading scores as measured by the QRI-3 quite dramatically regardless of gender or special services. Table 25 shows the numbers of students scoring at each QRI-3 level at pre- and post- assessment for both the instruction and control groups.

Table 21

Post- QRI-3 Reading Level Counts for the Instruction and Control Groups

Group	Incoming QRI-3 Level	Count	Final QRI-3 Level	Count
Instruction				
	Fifth	1	High School	9
	Fourth	6	Upper Middle School	10
	Third	2	Sixth	1
	Second	2	Third	2
	First	3		
	Primer	4		
	Pre-Primer	4		
Control				
	Fourth	7	Fifth	1
	First	6	Fourth	6
	Primer	2	Second	2
	Pre-Primer	3	First	4
			Primer	2
			Pre-Primer	3

On the between subjects factor of gender, means indicated that males and females appeared to have scored differentially at post testing. Examining cell means provided a clearer picture of what occurred within the instruction and control groups in relation to gender. Means for gender by group by time showed that males in both the instruction and control groups began the study at similar reading levels, roughly a QRI-3 Instructional Level 2. Females appeared to have differed on incoming reading levels. Females in the control group began instruction at approximately a QRI-3 level 2, while pretest means for females in the control group indicated that they were at approximately a

QRI-3 Independent Level 3. Two factors could have affected this result. First, there were more males in the ESOL group who started the program at the very lowest reading levels. Second, there were more girls in the control group who began the study reading at approximately a Level 4 as measured by the QRI-3.

When post means are carefully examined, it becomes clear that neither males nor females in the control group improved. However, both males and females in the treatment group improved considerably. Further, post test means indicated that males and females improved at similar rates. Males ended the study at approximately a QRI Instructional Level: Upper Middle School while females ended instruction at approximately a QRI-3 Independent Reading Level: Upper Middle School.

Examiner Reliability

Because I was conducting both the pre-and post- QRI-3 assessments for the treatment and control groups, I wanted a way to insure that my assessments were accurate. While I took every precaution to show no bias toward the treatment group, I wanted to show two things: First that I held no bias between the treatment and control groups at post testing because students in the treatment group had been with me for six months of instruction, and students in the control group had not. Therefore, I correlated the treatment and control groups with post-QRI-3 scale scores. I obtained a statistically significant correlation ($r=.851$, $p<.01$). This indicated to me that there was little bias on my part between the treatment and control groups at post testing and those students in both the treatment and control groups had responded to the post-QRI-3 assessments equally.

Second, I wanted to assure that my QRI-3 assessments were, indeed, accurate. For the treatment group, I was able to correlate first text read during instruction with QRI-3 Pre scores, and last text read during instruction with QRI-3 Post scores. The correlation between first text read and QRI-3 Pre scores for the instruction group was statistically significant ($r=.806$, $p. <01$). The correlation between QRI-3 Post scores for the treatment group and last text read was also significant ($r=.546$, $p<.01$). These correlations indicated that there was a significant relationship between the QRI-3 administrations and the texts read in class. I took this to mean three things. First, that my QRI-3 administrations for the treatment group at pre and post testing were accurate, second that I had chosen instructional texts well, and third, there was a high relationship between instruction and the assessment tool.

Summary: Investigation: Literacy Growth.

Through this investigation, I was able to confirm the first two of my three hypotheses, that a combination of word study and comprehension strategy instruction in appropriate text that builds on the student's current cognitive skill and is delivered at point of need would contribute to the increased literacy growth of adolescent struggling readers, and that it would be more effective in comparison to students who received no services.

My third hypothesis for this investigation was that the framework of challenging task in appropriate text would be equally effective across gender and school services. It appears as though the inability to reject the null supports my hypothesis. However, this is not the case. In order to support my hypothesis that instruction would be equally effective across gender and services, I would have to have a statistically significant effect of no difference. Logically, this is not possible.

However, means for gender and school services, while not statistically significant, indicated dramatic gains for both males and females the instruction group as well as for students who were receiving no services, special education or second language services. In particular, means for special education and second language students in the instruction group indicated that students in these two groups were able to improve their QRI-3 scores to the point that the gap between students receiving services and those receiving none began to close. This suggests the effectiveness of instruction across school services. What is important though, is that all students showed meaningful improvement regardless of gender or school services.

Results - Investigation: Text Structure

In this investigation, I was looking directly at the effects of text structure. My research question asked whether or not direct instruction in text structure could be used to assist students with narrative text negotiation and comprehension. I hypothesized that students who received direct instruction in text structure would be better able to use the rhetorical patterns in text as comprehension tools. I further hypothesized that students who received the text structure instruction would be better able to use rhetorical patterns in text than would their peers who received no text structure instruction. The design for this analysis was a pre-post control group design and the primary measure were pre- and post- QRI-3 retelling scores from the retelling and summary scoring rubric described in chapter 3.

Second, I hypothesized that students who were receiving text structure instruction would be better able to use the rhetorical patterns in text as a text negotiation and comprehension tool than would their peers in a comparison condition of response journaling. The design for this analysis was a within groups counterbalanced design. Only data from the students in the instruction group (n = 22) was used for this analysis. My measures were the classroom based assessments (CBAs) that included 3 multiple choice questions and student summaries scored using the retelling and summary scoring rubric discussed in chapter 3.

Finally, with both the pre-post control design and the within groups counterbalanced design, I hypothesized that the text structure instruction would be equally effective across both gender and school services.

I will report on each of these sub-designs separately. I will first report on the pre-post control design using the QRI-3 retelling scores. Then I will report on the within groups counterbalanced design using both the multiple choice questions and the student summaries from the 18 classroom based assessments.

Analysis of the Pre-Post Control QRI-3 Retellings

For this pre- post control group design, I performed a fully crossed 2 (Group) X 2 (Gender) X 3 (School Services) X 2 (Time: Retelling) mixed ANOVA using student's pre and post retelling scores as the within-subjects factor. Table 22 indicates the between and within subjects factors in this design and the corresponding levels of those factors. Table 23 reports means and standard deviations for group, gender, services, time and interactions. Table 24 is the ANOVA table for this analysis.

Table 22

Within and Between Subjects Factors for Investigation: Text Structure

Factors		Levels
Between	Groups	Instruction Group
		Control Group
	Gender	Male
		Female
	School Services	No Services
		Special Education
		English as a Second Language
Within	Time	Pre- QRI-3 Retelling rubric score
		Post- QRI-3 Retelling rubric score

Table 23

Means and Standard Deviations for QRI-3 Retellings

for Group, Gender, Services and Time

Between-Subject Factors	*Mean*	*Standard Deviation*
Group		
Instruction	11.000	3.236
Control	5.944	5.081
Gender		
Male	8.185	2.613
Female	9.846	4.879
Services		
No Services	9.083	5.247
Special Education	9.714	4.936
Second Language	7.428	4.415
Within-Subjects Factors		
Time: Retelling		
Pre: Retelling	2.825	2.772
Post: Retelling	5.900	3.579
Group by Time		
Pre: Retelling Instruction	2.818	2.519
Control	2.833	3.129
Post: Retelling: Instruction	8.181	2.238
Control	3.111	2.867
Gender by Time		
Pre Retelling for Males	2.296	2.613
Post Retellingfor Males	5.888	3.555
Pre Retelling for Females	3.923	2.871
Post Retelling for Females	5.923	3.774

Gender by Group by Time			
Males			
Pre: Retelling	Instruction	1.846	2.115
	Control	2.714	3.023
Post:Retelling	Instruction	8.230	2.554
	Control	3.714	2.946
Females			
Pre:Retelling	Instruction	4.222	2.488
	Control	3.250	3.947
Post:Retelling	Instruction	8.111	1.833
	Control	1.000	1.154
Services by Time			
Pre Retelling /No Services		2.166	1.992
Post Retelling/No Services		6.917	4.116
Pre Retelling/ Special Education		3.938	3.197
Post Retelling/ Special Education		5.785	3.117
Pre Retelling/ Second Language		2.825	2.772
Post Retelling/ Second Language		5.900	3.579
Services by Group by Time			
No Services			
Pre Retelling:	Instruction	3.000	1.851
	Control	0.500	1.000
Post: Retelling:	Instruction	9.500	1.927
	Control	1.750	1.258
Special Education			
Pre: Retelling	Instruction	4.000	3.089
	Control	3.875	3.482
Post: Retelling	Instruction	7.666	0.816
	Control	0.816	3.502
Second Language			
Pre: Retelling	Instruction	1.750	2.492
	Control	3.000	3.098
Post: Retelling	Instruction	7.250	2.764
	Control	2.333	2.250

Note. Scores were derived from the Retelling and Summary Scoring Rubric (Range 0-11).

Table 24

ANOVA Table for QRI-3Retelling Levels by Treatment Condition Gender and Services

Source	*df*	*MS*	*F*	*p*	*Observed Power*
Between- Subjects					
Group	1	147.670	<u>21.535</u>	<u>.000</u>	<u>.963</u>
Gender	1	0.529	0.770	.783	.013
Services	2	4.476	0.653	.528	.045
Group Gender*	1	10.367	1.512	.229	.078
Group Services*	2	11.321	1.651	.210	.128
Gender Services*	2	14.245	2.077	.144	.173
Group Gender *Services*	2	4.636	0.676	.517	.046
Error	28	6.857			
Within-Subjects					
Time:Retell	1	77.208	<u>13.947</u>	<u>.001</u>	<u>0.825</u>
*Time:Retell * Group*	1	103.181	<u>18.639</u>	<u>.000</u>	<u>0.931</u>
*Time:Retell *Gender*	1	19.577	3.536	.070	.210
*Time:Retell *Services*	2	7.720	1.395	.265	.104
*Time:Retell *Group* Gender*	1	0.190	0.034	.854	.011
*Time:Retell *Group *Services*	2	1.147	0.207	.814	.019
*Time:Retell *Gender *Services*	2	3.328	0.601	.555	.041
*Time:Retell *Group *Gender *Services*	2	4.170	0.753	.480	.051
Error (Time)	28	5.536			

Analysis of QRI-3 Retellings

Again, results of this analysis are fairly straightforward. The left hand column of Table 27 indicates the between and within subject factors and their levels as well as interactions. The row headings show the corresponding means and standard deviations for each between and within subjects factor as well as for interactions. The ANOVA (Table 28) shows all corresponding inferential statistics.

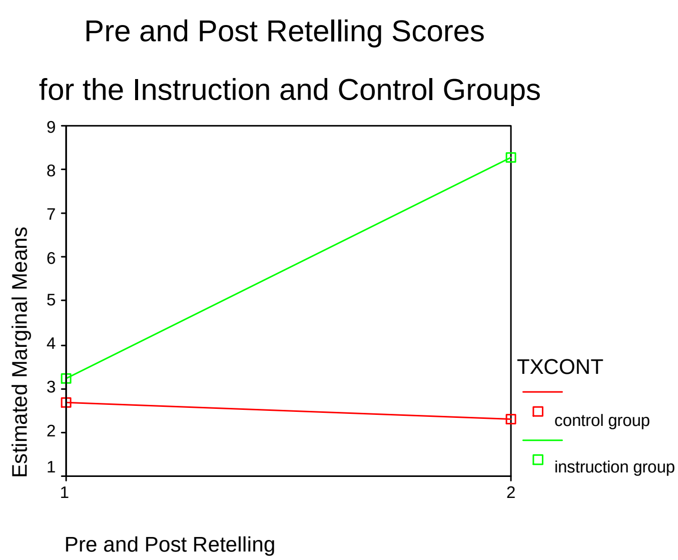
Between the instruction and control groups, a meaningful difference was observed ($F(1,28) = 21.535$, $p<.05$). On the between subjects factor of gender, means indicate that males and females scored about the same. Means for school services also indicate that students in each school services group did equally well. On the within subjects factor of time also indicates a meaningful difference ($F(2,28) = 13.947$) $p < .01$).

Again, it is only when means for interactions are examined that the effects of text structure become clearer. The time by group interaction indicates that students in the treatment group who received text structure instruction scored meaningfully better than did their peers in the control group ($F(1, 28) = 18.639$, $p<.01$). This finding allowed me to reject the null hypothesis and assume that direct text structure instruction contributed to students' ability to negotiate exposition through recognition of the rhetorical patterns in text. As with the Literacy Growth Investigation, effectiveness of treatment overcame both a small sample size as well as an alpha level set at .01. Students in the treatment group were better able to recognize text structure and use them to construct retellings than were their peers who received no text structure instruction.

Further, students in the treatment group received no instruction on the QRI-3 passages, indicating that they were able to transfer what they had learned from the text structure instruction to a new text and a new situation where their learning was not scaffolded through instruction. The line graph in Figure 24 shows this interaction. The green line indicates clearly the instruction groups' growth in ability to recognize text structure using pre and post retelling scores.

Figure 24

Group by Time Interaction



Finally, I found no significant interactions between gender and school services for the treatment effect. The means for gender by time indicate that males did equally as well as females at post-testing. While I am unable to reject the null that text structure instruction was equally effective for males and for females, these results may suggest that this was the case.

While not significant in my study, the means for school services are interesting. These also indicated that students in each of the three groups did equally as well at post testing, with the exception of the Second Language group. The services by time means showed roughly the same thing. The means for services by group by time showed that, at pre-testing, students in the control group who were receiving no services scored much lower than initial scores for students in the treatment group. However, at post-testing students receiving no services out performed their peers in the control group, but did so by a much larger margin.

Pre testing means for special education students were very close to equal. At post-testing, students in the treatment group out-performed their peers. However, the control group means for pre and post testing varied. Post testing means for the control group dropped. This may make the treatment group mean appear somewhat inflated.

Among the second language students, the students in the control group did better at pre-testing than did their peers in the treatment group. However, at post testing, second language students in the treatment group surpassed their peers, again by a much larger margin. Although there were some differences in control group means that may make instruction group scores appear inflated, the differences in the treatment group results still suggest the possibility that text structure instruction was equally effective across both gender and school services. Again, this finding was not statistically significant

Analysis of Mid-Point QRI-3 from the Within Groups Counterbalanced Design.

In this design, I hypothesized that students in the text structure 1 (TS1) group would out-perform their peers in the journaling comparison group on the classroom based assessment measures. I again hypothesized that the text structure instruction would be equally effective across gender and school services. This design employed a within groups crossover allowing students in the text structure 1 and text structure 2 groups to act as their own control. Participants in this design were students who were in the instruction group only (N=22). The TS 1 group had 12 students and the TS 2 group had 10 students. Students' reading levels across the two groups were matched as closely as possible. Figure 25 depicts this crossover design.

Figure 25

Within-Groups Crossover Design

Intervention Group (N=12) Text Structure 1 (TS1) Classes 3, 5 & 6	Text Structure Instruction (Treatment: TS 1 Weeks 1-9)	Journaling (Comparison: TS 1: Weeks 10-18)
	Crossover	
Intervention Group (N=10) Text Structure 2 (TS2) Classes 2, 7 & 8	Journaling (Treatment: TS 2: Weeks 1-9)	Text Structure Instruction (Comparison: TS 2: Weeks 10-18)

Initial Differences Between the TS1 and TS 2 Groups

Because I wanted reading levels to be similar in both the TS1 and TS 2 groups, I conducted a one way analysis of variance using TS1 or TS 2 as the fixed factor and incoming reading level as the between subjects factor. Results in Table 25 indicated that there were no significant differences between the TS1 and TS 2 groups on incoming reading level (F = .054, p.> .01)

Table 25

Differences Between Text Structure Groups on Incoming Reading Level

Source	*df*	*ms*	*F*	*p*
Between	1	0.480	.054	0.818
Error	20	8.861		
Total	21			

For this investigation, I collected weekly classroom based assessments. One assessment was collected each week for 18 weeks, yielding 18 assessments per student. Each assessment contained three multiple choice questions: one literal, one inferential and one text structure question. Each week's assessment also asked students to summarize the text. Students were permitted to use the texts to complete the assessment. All students in the instruction group were given a written QRI-3 at the point of crossover that was one QRI-3 level above where they had begun the program.

I analyzed each of the three types of multiple choice questions separately. Students could either score a 1 for a correct answer or a 0 for an incorrect answer. The summaries were analyzed using the Retelling and Summary Scoring Rubric on which scores could range from 0-11. Finally, to look at content knowledge, I used a weighted content word count.

To determine students' progress at the exact point of the crossover, I administered a written QRI-3 to all students at the end of week 9, which was the Friday prior to the day students in the TS1 group switched to journaling and students in the TS 2 group began text structure instruction. For this analysis, I performed a one-way analysis of variance, 2 (Group: TS1 or TS2) X (Assessment: QRI-Mid). Table 26 indicates means and standard deviations for this analysis. The ANOVA table is reported in Table 27.

Table 26

Means and Standard Deviations for TS1 and TS 2 on QRI-Mid.

Group	Mean	Standard Deviation
Text Structure 1	4.450	2.985
Text Structure 2	3.833	3.944

Note: Range of QRI -3 Scores: .01-15.

Table 27

ANOVA for TS1 and TS2 on the Mid-Point QRI-3.

Source	*df*	*MS*	*F*	*p*
Between Groups	1	2.074	0.165	.689
Error	20	12.570		
Total	21			

Note: Homogeneity of variance was not statistically significant at .01.

This analysis was designed to determine whether or not the direct text structure instruction had an effect on overall reading level. The means and the ANOVA indicated that the TS1 and TS 2 groups were approximately equal on reading level at the point of crossover. However, the written mid-point QRI-3 did not directly address any structural elements through retellings. Students were asked to silently read the passage and then write their answers to the QRI-3 comprehension questions. Each student read a passage one level above his incoming instructional reading level. All students, regardless of group, scored at the instructional QRI-3 level on this mid-point assessment. This indicated that the strategy instruction was effective and that all students were progressing. However, it did not indicate any differences in students' ability to utilize text structure as a comprehension tool.

Recall that students receiving school services began the program with much lower incoming QRI-3 reading levels. Therefore, if a student's incoming level was a QRI-3 Primer level then s/he took the Level 1 QRI-3 at mid-point. This may have led to an underestimation of literacy growth in this mid-point assessment. Had students been able to continue in the QRI-3 at mid-point until they reached their frustration level, this assessment may have been more telling.

Analysis of Classroom Based Assessments: Within Groups Counterbalanced Design.

Five separate analyses were conducted using this data. First, because I wanted to know how participation in the text structure group might affect students' abilities to answer literal, inferential and text structure questions, I analyzed each question separately using a 2 (Order) X 18 (Time: Question) mixed ANOVA for each. I then performed a 2(Order) X 18 (Time: Summary) mixed ANOVA using data from the student summaries.

Finally, I performed a 2 (Order) X 18 (Time: Content) mixed ANOVA using the weighted word count scores from students' summaries. In the rest of this section, I will report and analyze each of the multiple choice questions beginning with the literal question. Second I will report the inferential question and last, I will report in the results of the text structure question. I will then report and analyze the student summaries and the content word counts.

For each of these 5 analyses I did not include the between subjects factors of gender and school services. Cell sizes were too small to allow the analyses to be run and many would not run because there were empty cells. Further, had they been run, they would not have yielded any dependable results.

Analysis of the multiple choice questions. For the literal question, I ran a 2 (Order) X 18 (Time: Literal) mixed ANOVA. Table 28 shows the means for the between subjects factor of group. Means and standard deviations for Time: Literal appear in appendix D. However, I have included the means and standard deviations for the first and last literal question. Table 29 below is the ANOVA table for the literal question.

Table 28

Means and Standard Deviations for Group on the Literal Multiple Choice Question

Group	Mean	Standard Deviation
<u>Group</u>		
Text Structure 1 (n = 10)	17.700	0.483
Text Structure 2 (n = 12)	17.416	1.164
<u>Question 1</u>		
Treatment Group (n=22)	1.000	0.000
Text Structure 1	1.000	0.000
Text Structure 2	1.000	0.000
<u>Question 18</u>		
Treatment Group (n= 22)	1.000	0.000
Text Structure 1	1.000	0.000
Text Structure 2	1.000	0.000

Note: Range: 0-1

Table 29

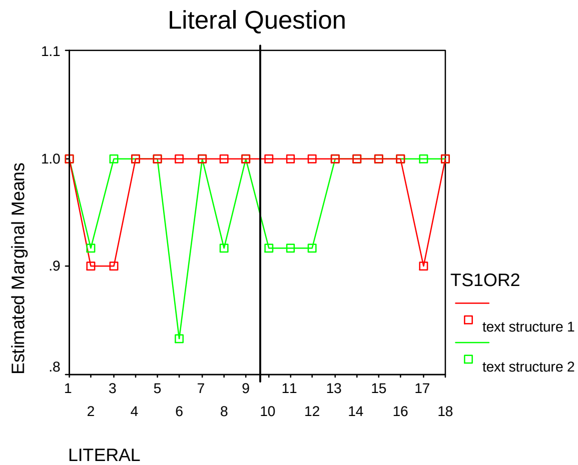
ANOVA table for Literal Multiple Choice Question

Source	*df*	*MS*	*F*	*P*	*Observed Power*
Between-Subjects					
Order	1	.0024	.515	.481	.028
Error	20	.0047			
Within-Subjects					
Time	17	.0021	.897	.578	.389
*Time*Order*	17	.0022	.973	.489	.438
Error	340	.0023			

The means and the ANOVA for this analysis did not indicate that there was any significant difference between the two groups. However, exploring the number of questions students answered correctly or incorrectly may be indicative of a trend. The plot in Figure 26 indicates that, in general, students in the TS 1 group began answering literal questions correctly prior to their peers in the TS 2 group. The black line running through the center of the graph indicates the crossover point. Students in TS1 also continued to answer literal questions correctly with more consistency than did their peers in the TS 2 group. This result may be related to an earlier understanding of text structure and text negotiation skills. Recall, however, that the range for these questions is only 0-1. Therefore, the plot looks as though student responses are farther apart than is truly the case. A marginal mean of .9 means that only one student answered the question incorrectly. A marginal mean of .8 means that only two students answered the question incorrectly. Because no means for any set of questions were below a .9, the means also indicated that all students were able to answer the literal question correctly most of the time. Also, although there were 18 questions for each week, not all students were answering the <u>same</u> question each week. Some differences could be present because of the actual question items.

Figure 26

Plot of Literal Question



The second analysis of multiple choice questions was the analysis of the inferential question. Again, I performed a 2 (Group) X 18 (Time Inferential) analysis of variance to determine whether text structure instruction had any influence on student abilities to answer literal questions. Table 30 reports the group means and standard deviations for the inferential question. Means for Time Infere ntial can be found in Appendix E. Again, I have included means for question 1 and question 18. Table 31 is the ANOVA table for the inferential multiple choice question.

Table 30

Means and Standard Deviations for Group on the Inferential Multiple Choice Question

Group	Mean	Standard Deviation
Text Structure 1 (n = 10)	16.700	1.159
Text Structure 2 (n = 12)	16.200	1.381
<u>Question 1</u>		
Treatment Group (n=22)	0.909	0.294
Text Structure 1	0.800	0.421
Text Structure 2	1.000	0.000
<u>Question 18</u>		
Treatment Group (n= 22)	0.836	0.351
Text Structure 1	0.900	0.316
Text Structure 2	0.833	0.389

Note: Range: 0-1

Table 31

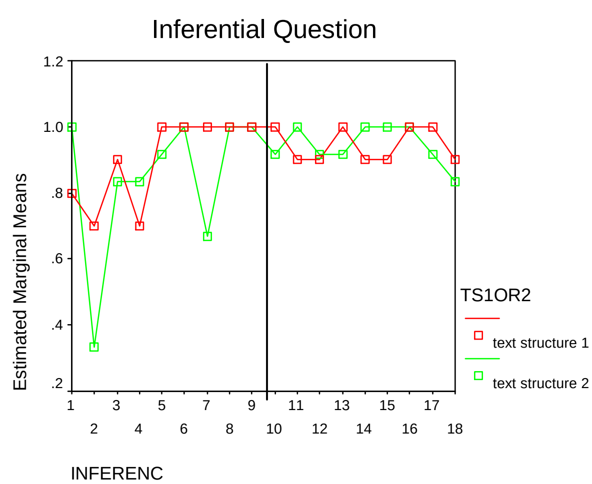
ANOVA table for Inferential Multiple Choice Question

Source	*df*	*MS*	*F*	*P*	*Observed Power*
Between-Subjects					
Order	1	.0080	0.993	.331	.049
Error	20	.0081			
Within-Subjects					
Time	17	.2970	4.124	.000	.987
*Time*Order*	17	.1140	1.583	.114	.534
Error	340	.0072			

An effect for time occurred, indicating that students across both groups were able to improve in their ability to answer inferential questions (F (17,340) = 4.124, p<.01). However, there was no effect for group by time. The plot in Figure 27 again shows trends. The red line represents students in TS1. These students began to answer inferential questions correctly more quickly than did their peers in the TS 2 group. By the second half of the instructional time, when students switched over, both the TS1 and TS 2 groups were answering the inferential question correctly at about the same rate.

Figure 27

Plot of Inferential Question



The final multiple choice question analysis I performed was a 2(Time) X 1 8 (Time: Text Structure) mixed ANOVA for the text structure question. Means and standard deviations for group are reported in Table 32 along with means and standard deviations for questions 1 and 18. Means and standard deviations for time: text structure can be found in Appendix F. Table 33 is the ANOVA table for this analysis.

Table 32

Means and Standard Deviations for the Text Structure Multiple Choice Question

Factor	Mean	Standard Deviation
Text Structure 1 (n = 10)	14.900	1.663
Text Structure 2 (n = 12)	12.500	2.026
<u>Question 1</u>		
Treatment Group (n=22)	0.681	0.476
Text Structure 1	0.600	0.516
Text Structure 2	0.750	0.452
<u>Question 18</u>		
Treatment Group (n= 22)	0.836	0.351
Text Structure 1	0.800	0.421
Text Structure 2	0.863	0.351

Note: Range: 0-1

Table 33

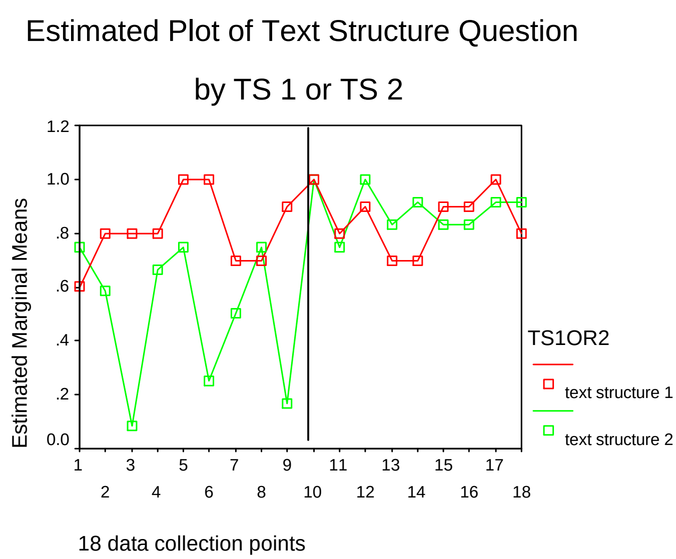
ANOVA Table for Text Structure Multiple Choice Question

Source	*df*	*MS*	*F*	*P*	*Observed Power*
Between-Subjects					
Order	1	1.894	11.556	.003	.705
Error	20	.0081			
Within-Subjects					
Time	17	.502	3.465	.000	.998
*Time*Order*	17	.502	3.465	.000	.998
Error	340	.145			

Means for group indicated a statistically significant effect (F (1,20) = 11.556, p<.01). An effect was also observed for time (F (17, 340) = 3.456), p<.01). An interaction effect for order bytime was also present (F (17,340) = 3.456, p<.01). The meaning of this interaction is made clear in Figure 28. The black line on the graph indicates the exact point of crossover.

Figure 28

Order by Time Interaction



What is clear from this graph is that the students who received text structure instruction first answered the first 9 and the second 9 text structure questions with equal accuracy. The students who received the text structure instruction during the second nine weeks varied greatly in their ability to answer the text structure question during the first 9 weeks, but at about week 10 or 11 begin to do as well at answering these questions as their peers who were no longer receiving text structure instruction.

This analysis reveals three important things. First, the text structure instruction was effective for all of the students in the instruction group. Second, it also appears that students who received the text structure instruction first did better on the text structure question across the entire instructional period. Students in the TS 2 group began answering the text structure question correctly shortly after they began direct instruction in text structure. Finally, students who received text structure instruction first maintained their knowledge even after they were no longer being given direct text structure instruction.

The group by time interaction allowed me to reject the null and partially support my second hypothesis. Students in the TS 1 group were better able to recognize structure in text. However, the finding that this knowledge held across the nine weeks that they did not receive text structure instruction also confirmed that instruction in text structure enabled students to negotiate text. This carryover or transfer finding is a very positive result, and one that I had not hypothesized.

Analysis of student summaries. The next step in analyzing the CBA's was to analyze the weekly student summaries. To do so, I again performed a 2 (Group) X 18 (Time: Summary Scores) mixed ANOVA with group as the between subjects factor and student summaries over time as the repeated measures factor. Table 34 indicates group means and standard deviations as well as means and standard deviations for summary 1 and summary 18. Means and standard deviations for time are reported in Appendix G and the ANOVA table is reported in Table 35.

Table 34

Means and Standard Deviations for Student Summaries

Group	Mean	Standard Deviation
Text Structure 1 (n = 10)	118.800	16.185
Text Structure 2 (n = 12)	94.083	15.305
<u>Summary 1</u>		
Treatment Group (n=22)	6.363	1.865
Text Structure 1	6.800	1.316
Text Structure 2	6.000	2.215
<u>Summary 18</u>		
Treatment Group (n= 22)	6.818	2.630
Text Structure 1	7.100	2.131
Text Structure 2	6.583	3.058

Note: Range: 0-11 using the retelling and summary scoring rubric

Table 35

ANOVA Table for Student Summaries

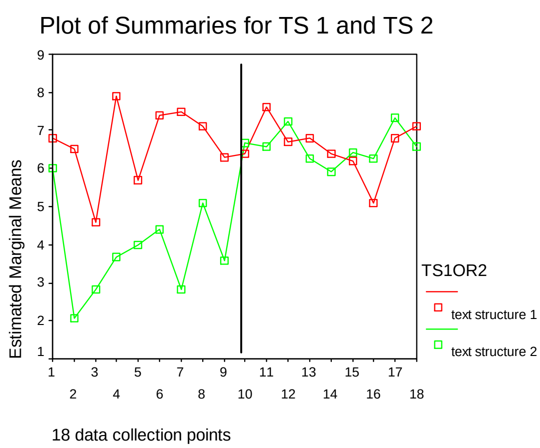
Source	*df*	*MS*	*F*	*P*	*Observed Power*
Between-Subjects					
Order	1	180.659	12.330	.002	0.739
Error	20	14.653			
Within-Subjects					
Time:Summary	17	20.780	4.180	.000	1.0
*Time*Order*	17	16.481	3.315	.000	0.997
Error	340	4.972			

Results of this analysis supported results of the analysis of text structure multiple choice question and, in fact, look very similar. Between the TS1 and TS 2 groups, a meaningful difference was observed. (F (1,20) = 12.330, $p<.01$). There is also a statistically significant effect for time (F (17,340) = 4.180, $p<.01$).

An order by time interaction was also present (F (17, 340) = 3.315, $p<.01$). Indicating that, as with the text structure question, order mattered in student ability to create summaries that matched the structure of the text. Students in the TS 1 group began using their knowledge of text structure to construct summaries almost from the beginning of instruction. Further, their use of text structure in summary construction did not decrease significantly even after they were no longer receiving instruction in text structures. Students in the TS 2 group began to utilize text structure in the creation of their summaries at week 10, one week after their text structure instruction began. This interaction can be seen in Figure 29. The black line down the center indicates the exact point when students switched from text structure to journaling or vice versa.

Figure 29

Plot of Order by Student Summary Interaction



These results mean two things. First, text structure instruction assisted all students in their ability to create summaries that matched the structure of the texts. Again, this result allowed me to reject the null and support my hypothesis that text structure instruction would increase students' ability to comprehend and negotiate expository text.

The second part of my hypothesis was only partially supported. Students in the TS 1 group did better with summarizing while they were receiving text structure instruction. Students in the TS 2 group also did better with summarization after they were receiving text structure instruction. However, students who received text structure instruction first continued to use their knowledge of text structure in constructing summaries even after they were no longer receiving direct instruction in text structure. The finding that this knowledge held across nine weeks that they did not receive text structure instruction and was exhibited through the expressive act of writing also confirmed that instruction in text structure enabled students to negotiate text. This carryover or transfer finding is a very exciting result. Again, this is an important transfer finding and one that I had not hypothesized. It is possible that some of this may be due to a practice effect involved in the summary writing.

Analysis of word counts. In this analysis, I performed a 2 (Order) X 18 (Time: Word Count) repeated measures ANOVA using the weighted word count scores from each student summary as the within subjects factor and time as the between subjects factor. The assumption of sphericity was not met for this analysis. Therefore, because I am already using a conservative alpha of .01, I report both the sphericity assumed and the Hyunh-Feldt corrected model in the ANOVA table. Means and standard deviations for group are reported in Table 36, as are the word count means and standard deviations from summary 1 and summary 18. Means and standard deviations for time: word count can be found in Appendix H. The ANOVA table for content word count analysis is in table 37.

Table 36

Means and Standard Deviations on Word Counts for Group

Group	Mean	Standard Deviation
Text Structure 1 (n = 10)	1523.5100	347.926
Text Structure 2 (n = 12)	1557.025	482.040
<u>Word Count 1</u>		
Treatment Group (n=22)	30.177	23.116
Text Structure 1	39.040	18.495
Text Structure 2	22.791	24.685
<u>Word Count 18</u>		
Treatment Group (n= 22)	178.631	127.581
Text Structure 1	123.050	41.073
Text Structure 2	224.950	156.668

Note: Range: 0-250

Table 37

ANOVA Table for Word Counts

Source	*df*	*ms*	*F*	*p*	*d*
Between					
Order	1	340.380	0.034	.856	.011
Error	20	10126.291			
Within					
Order	17	39185.953	17.608	.000	1.0
Corrected	6.286	105976.768	17.608	.000	1.0
*Order*Time*	17	5485.163	2.465	.001	.969
Corrected	6.286	14834.395	2.465	.025	.624
Error	340	2225.454			
Corrected	125.718	6018.648			

Results of this analysis were less straightforward. Between the TS1 and TS 2 groups, a meaningful difference was observed. (F 17,340) =17.608, $p<.05$). A group by time interaction was also observed (F (17,340) = 2.465, $p<.01$; corrected p = .025).

What is crucially important with this analysis is the interpretation of results. Recall that when word counts were done, a content vocabulary word was only counted one time. This type of counting alleviated issues of recursive writing, or writing about the same topic more than once in a summary. What was counted then was each time a student mentioned a new vocabulary word from the text. Also, grammatical functions such as noun markers and question words were not counted, paring down the word count to vocabulary words only related to the topic.

It appears as though all students increased in their ability to extract content words from text. The plot in Figure 30 indicates amount of content appearing in student summaries consolidated across both groups. While a practice effect was possible, it is also possible that as texts became more demanding, students had more to write about and were able to use their mounting knowledge to assist them in creating summaries with accurate and dense content.

Figure 30

Growth in Time for Word Counts from All Student Summaries.

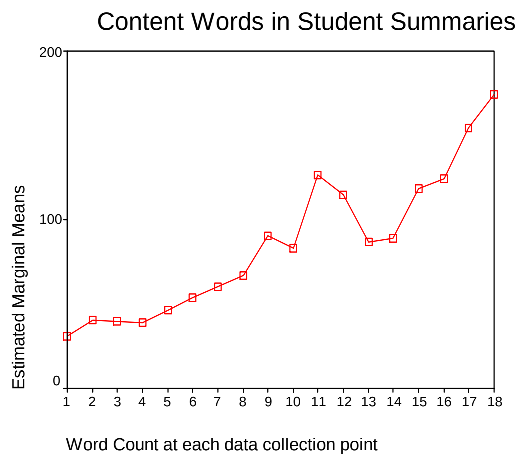
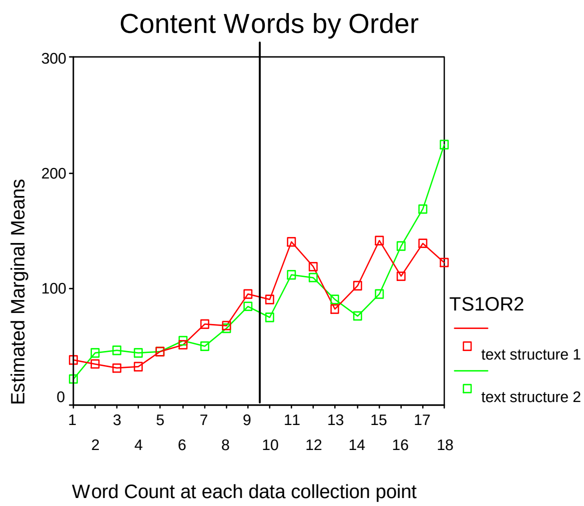


Figure 31 indicates the interaction between word count and time. Again, the black line indicates the exact point of crossover. What is observed on this graph is that while all students progressed over time, an interaction occured at about Time 15. At time 15, students in the TS 1 group began to level off in their use of content vocabulary, while students in the TS 2 group continued to increase their use of content vocabulary over the last three summaries.

Figure 31

Content Words by TimeInteraction



An understanding of what was happening at time of instruction is very important to understanding this data. By the end of the 18 weeks of instruction, all students were reading much more challenging texts. Students in the TS 1 group were reading *Ecosystems* and *Maryland*, while students in the TS 2 groups were reading *Nature's Power*, *Musicians and the Underground Railroad.* Recall from Table 4 in Chapter 3 that these texts were all considerably dense and had difficult global structures with many varied sub-structures and topic changes occurring throughout the text. All three raters had difficulty graphing the structure of these higher texts.

By this point, students had been in the program for 15 weeks and were becoming much more adept at negotiating exposition. However, the interaction may have occurred because students who were in the text structure 2 group were being scaffolded through the structures of these difficult texts. As this instruction took place, it was not devoid of content. Quite the opposite, the point of the text structure instruction was to assist students in determining how content was presented. On the other hand, word counts drop off for students who were not receiving text structure instruction, perhaps because they were not being scaffolded through the structures of the most difficult texts and therefore were not as able to extract as much important content knowledge. This finding lends support to the use of text structure instruction as a text negotiation and comprehension tool.

Analysis of Differences Across Gender and School Service for All CBA Measures.

Because means for 18 time points were not meaningful for considering any differences among gender or school services, I formed composite variables for each of the multiple choice questions, student summaries and word count totals. I did this by adding the raw score for each variable in question by the 18 time points. I then compared the means and standard deviations of these composite variables across gender and school services for the TS 1 and TS 2 groups. This allowed me to analyze means that might be meaningful to my study. For each of the new variables: Literal Total, Inferential Question Total, Text Structure Question Total, Student Summaries Total, and Word Count Total, I performed a 2 (group: TS 1 or 2) X 2 (Gender) X 3(Services) X 1 (New Dependent Variable) univariate analysis of variance. Group, gender, and services were the between subjects factors and each of the five new variables was the dependent variable in its respective analysis. I performed the same type of ANOVAs using a Summary Total and a Word Count Total composite variable for those analyses. Even after forming new composite variables, no systematically meaningful differences between means for gender or school services became apparent.

Summary: Investigation Text Structure

Through this analysis, I was able to confirm each of my three initial hypotheses about text structure instruction. First, students in the instruction group recognized and transferred text structure instruction to a situation without teacher support better than did their peers who received no instruction. I measured this using the QRI-3 retellings in a pre-post control design.

My second hypothesis was that students in the text structure groups would be better able to negotiate exposition than their peers in the journaling condition. This was only true for the TS 1 group. Students in the text structure group only did better than the comparison condition if they had received text structure instruction first. When the second group received the instruction they were able to match the performance of their peers. A promising finding from this analysis was that students in the TS 1 Group maintained and possibly transferred that knowledge to new texts when they were no longer in the text structure group, indicating that order mattered. I measured this in two ways, through a multiple choice question regarding text structure, and through student summarization of text using repeated measures ANOVAS. A second measure of student ability to negotiate exposition was through the use of content word counts. This analysis confirmed that students who received text structure instruction when the books were most challenging were better able to use this instruction as a comprehension strategy. This was a very preliminary but exciting finding.

Finally, I was unable to confirm my third hypothesis that the text structure instruction would be equally effective across gender and school services. Some results appear to support the hypothesis that the text structure instruction was effective across gender. However, I was unable to reject the null. Means for school services were too differential to draw any conclusions about the effectiveness of text structure instruction across services.

Results - Investigation: Motivation

Students in the instruction group (n=22) took the Motivation for Reading Questionnaire at the beginning and the end of the 18 weeks of instruction. This design is a pre-post instruction group only design. I originally hypothesized that providing goal oriented instruction through the framework of challenging task in appropriate text would increase students' intrinsic motivation. I further hypothesized that this would be the case regardless of gender or school services. I used the two MRQ scales I deemed most appropriate for this study. Each scale is reported in terms of a standard score. The method for deriving these scores is outlined in Chapter 3.

Differences Among Groups

I ran two univariate analyses of variance using students' standard scores from the reading efficacy and reading challenge scales on the pre-MRQ assessment to determine if there was any initial difference by gender or by services. Also, I used TS (1) and TS (2) as factors because students in these classes were matched on incoming reading level. The ANOVAs for both reading efficacy and reading challenge were (2) Group X (2) Gender X (3) Services designs. I found no significant differences by group, gender or school services, indicating that reading efficacy and reading challenge were equal across the treatment group, gender and services at the start of the study. Tables 38 and 39 are the ANOVA tables for reading efficacy and reading challenge respectively.

Table 38

ANOVA of No Difference for Reading Efficacy

Source	*df*	*MS*	*F*	*p*
Between-Subject				
Group	1	.593	1.300	.275
Gender	1	.708	1.551	.235
Services	2	.128	0.281	.759
Group Gender*	0			
Group Services*	2	.406	0.890	.434
Gender Services*	1	.710	1.556	.234
*Group*Gender* Services*	0			
Error	13	0.456		
Total	21			

Table 39

ANOVA of No Difference for Reading Challenge

Source	*df*	*MS*	*F*	*p*
Between-Subject				
Group	1	1.382	2.002	.161
Gender	1	0.312	0.452	.513
Services	2	0.144	0.208	.815
Group Gender*	0			
Group Services*	2	1.552	2.248	.145
Gender Services*	1	0.497	0.720	.411
*Group*Gender* Services*	0			
Error	13	0.690		
Total	21			

Analysis of the MRQ

For this analysis I performed two repeated measures 2 (Time Pre-Post) X 1 (Instruction Group) ANOVAS. I performed the first using the standard scores from the pre and post reading efficacy scales and the second using the standard scores from the pre- and post- reading challenge scales. Prior to running the analyses, I correlated two motivation measures to determine if there was significant shared variance to report a single measure. The correlation was r =.491, and was only significant at the .05 level. While there may have been some shared variance between reading efficacy and reading challenge, because my alpha was set at .01 for this study, I chose to run two separate analyses. Huck (2004) indicated that when each participant in the study provided two or more pieces of data at each level of the repeated measures factor, with each score corresponding to a different dependent variable, that a repeated measures ANOVA may be performed for each of the dependent variables. Sphericity was not an issue in these analyses.

Again, I report these finding at a .01 level. This was particularly important for this analysis because only the 22 students in the instruction group took the MRQ. For this same reason, I again report observed power. Means and standard deviations as well as the ANOVA table for reading efficacy are reported in Table 40. The means and standard deviations for reading challenge are reported in Table 41 along with the ANOVA table for reading challenge.

Table 40

Means, Standard Deviations and ANOVA Table for Reading Efficacy

	Mean	Standard Deviation
Time		
Efficacy Pre.	2.670	.6654
Efficacy Post.	3.147	.5155

(Range: 0-4)

AONVA Table for Reading Efficacy

Source	*df*	*MS*	*F*	*p*	*d*
Reading Efficacy					
Within	1	2.506	13.174	.002	.777
Error	21	0.190			

Results supported my hypothesis that providing students with goal-oriented instruction would increase their motivation for reading. Students' sense of efficacy, or belief in themselves as readers was indicated by a statistically significant increase (F= (1,21) 11.142, p.< .01). These results allowed me to reject the null.

The second analysis was a 2 (Time Pre-Post) X 1 (Instruction Group) repeated measures ANOVA for reading challenge. Means, standard deviations and the ANOVA table for reading challenge are found in Table 41.

Table 41

Means, Standard deviations and the ANOVA table for Reading Challenge

	Mean	Standard Deviation
<u>Time</u>		
Challenge Pre**.**	2.350	.8057
Challenge Post.	2.963	.6129

(Range: 0-4)

ANOVA Table for Reading Challenge

Source	*df*	*MS*	*F*	*p*	*d*
Reading Challenge					
Within	1	4.142	11.624	.003	.713
Error	21	.356			

This analysis indicated that students' willingness to take risks and to tackle difficult text increased from the beginning to the end of the instruction (F= (1, 21) 11.624, p<.003). I had expected reading efficacy to increase. However, I found this result to be a bit more surprising. Students who have fallen into a pattern of reading failure are generally not willing to take risks. I did not expect that my treatment would change this in such a short time.

Analysis of motivation by gender and school services. Because there were only two time points in this investigation I was unable to form composite variables. Cell sizes were too small for any statistical analysis. Therefore, I analyzed standard deviations for gender, school services, time and interactions. These can be found in Appendix I. Again, no systematic differences occurred for either reading efficacy or reading challenge.

Summary: Investigation Motivation

Through this investigation, I was able to confirm my hypotheses that students' self efficacy beliefs would increase when provided with goal – oriented instruction. I measured this increase in two ways. I used the MRQ standard scores from the MRQ scale: Reading Efficacy, and I used the MRQ standard scores from the MRQ Scale: Reading Challenge. On the means for gender and school services, I was unable to find any systematic differences for gender or school services.

Conclusion

Results across all three investigations suggested that the framework of challenging task in appropriate text was effective. One of the ways to increase the power of a statistical result is to increase the effectiveness of the treatment condition. In all three analyses, the effect of treatment overcame both a relatively small sample size as well as a conservative alpha set at .01.

Results of *Investigation: Literacy Growth* suggested the effectiveness of the model of challenging task in appropriate text for accelerating the literacy growth of adolescent struggling readers regardless of gender or school services. Further, results of the text structure investigation suggested that all students were able to not only understand, but also to use text structure as a comprehension tool and as a tool for negotiating exposition. Results also suggested that students were able to transfer this knowledge to an independent situation. In the TS 1 group, results also indicated that students maintained their knowledge of text structure across the nine weeks when they were participating in the comparison condition. However, analysis of the means indicated that students' growth in text structure across gender and school services was differential.

Analysis of means in the pre-post control conditions for literacy growth and text structure retellings, suggested that the instruction may have been equally effective across gender and school services. This was not statistically significant in my study.

Results of the motivation investigation suggested that students' belief in themselves as capable readers and their willingness to take risks as readers also increased from the beginning to the end of the study. Again, analysis of the means for gender and school services revealed no systematic patterns.

Chapter 5

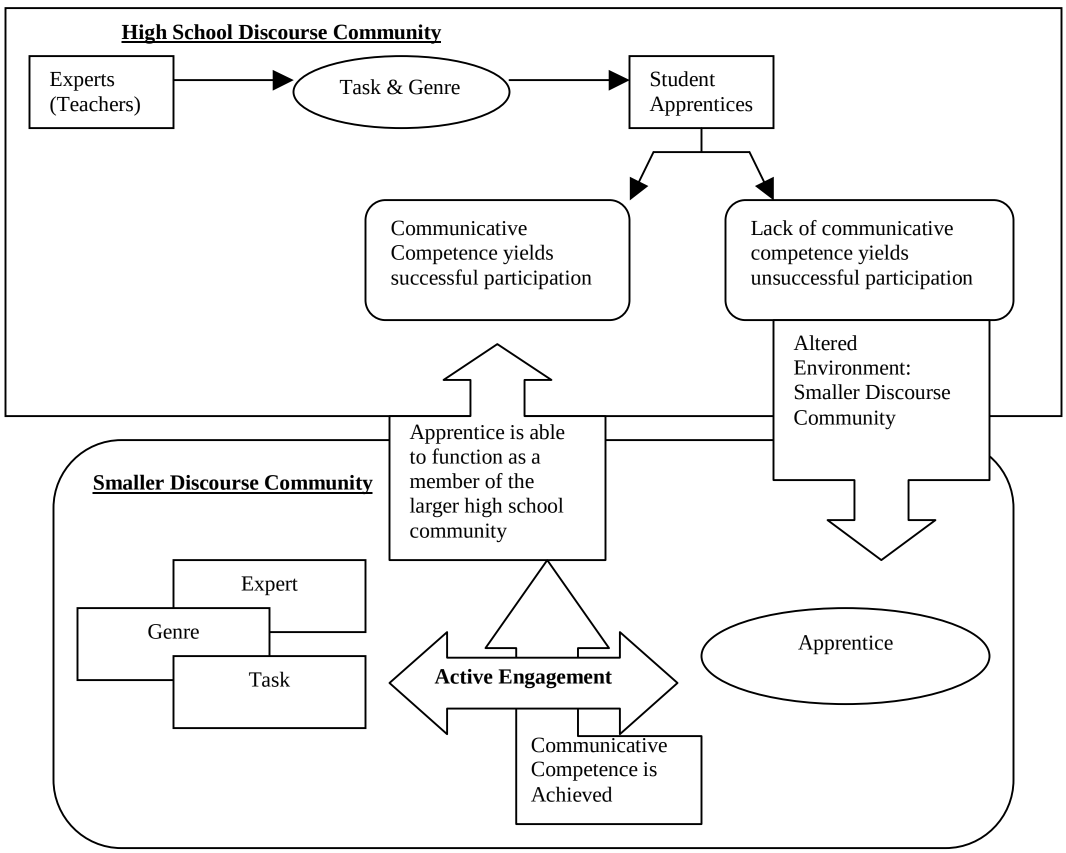
Conclusion and Implications for Research and Instruction

This study invited adolescent struggling readers to become communicatively competent members of a discourse community designed to meet their instructional needs (Chapman, 1999; Swales; 1990). Embedded within these discourse communities, it examined the effectiveness of using the framework of challenging task in appropriate text to provide students an avenue for learning (Swales, 1990). It also examined what role student learning about text structure played in comprehension and negotiation of exposition along with any effects the framework may have had on students' intrinsic motivation. I investigated three research questions: (1) What is the effect of using an instructional framework of challenging task in appropriate text on students' literacy growth over time? (2) What effect does direct instruction in text structure have on students' ability to use the rhetorical patterns in text as a text negotiation and comprehension strategy? (3) How does the model of challenging task in appropriate text affect change in the intrinsic motivation of adolescent struggling readers? This chapter summarizes the findings and discusses answers to the three questions. The chapter concludes with implications for research and instructional practice.

I hypothesized that altering the high school environment was the first step in accelerating the literacy growth of these students (Brown, 1992). Using the discourse community model (Bakhtin, 1986; Chapman, 1999; Swales, 1990), presented again in Figure 32, I did so by creating smaller discourse communities where students could learn the requisite skills that would allow them to function within the larger discourse community of the high school. As the expert member, through genre and task, I apprenticed students in the acquisition of communicative competence (Chapman, 1999; Swales, 1990) that would ideally lead to their improved abilities to function within the larger community of the high school.

Figure 32

A Conceptualization of Discourse Communities



Instructional Tasks in Appropriate Texts

Within the discourse community, both text and task were key because the purpose of the smaller discourse communities was to increase students' abilities to read academic text (Swales, 1990). Students read books that allowed them to move beyond the text cognitively. The text then became a cultural tool for allowing students further growth (Bruner, 1991;Vygotsky 1978). This dissertation focused on increasing the literacy skills of struggling adolescent readers through using low-level text to support higher-level comprehension and thinking strategies.

Text was crucial to this study because adolescents possess greater cognitive abilities than younger children do. I chose texts that linked to background knowledge, provided interesting content, and served as bridges to broader cognitive and curricular goals. Texts chosen for this study allowed students to apply what they already knew to new learning situations. I chose expository text that I thought would be inherently interesting and based in real world knowledge while offering avenues for further instruction and exploration.

Assisted performance (Gallimore & Tharp, 1990; Vygotsky, 1978) in task was also key in this study because instruction had to be working in tandem with text to provide students with a learning environment where success was possible. The instructional framework I created encompassed many important principles drawn from research. In the first phase, students engaged in the task of rereading texts they had already read to provide fluency, decoding and comprehension support (Clay & Cazden, 1990; Millis & King, 2001). In the second phase, students' task was to negotiate a new text. I supported this initial reading of a text with cognitive strategy instruction drawn from Gallimore and Tharp's (1990) six means of assisting performance. During *phase II*, students focused on text comprehension by building a repertoire of strategies they learned to use flexibly (National Reading Panel, 2000; Palinscar & Brown, 1984; Pressley, 2000; Smolkin & Donovan, 2001; Snow et al., 1998; Vaughn, 2000). In the third phase, students engaged in learning to understand the various rhetorical patterns of the exposition they had just read. Students then added these patterns to their repertoire of comprehension strategies (Chambliss & Calfee, 1998; Meyer & Poon, 2001).

The framework embedded the tasks of acquiring decoding skill, cognitive reading strategies, and knowledge of text structure within the environment of the discourse community. These embedded tasks served the purpose of apprenticing students toward the goal of gaining academic literacy that would allow adolescent struggling readers to accelerate their literacy development. (Bakhtin, 1986; Chapman, 1999; Gallimore & Tharp, 1990; Swales, 1990;Vygotsky, 1978).

When these individual pieces of the instructional framework situated within the discourse communities we created, are considered as a whole, this study sheds light on some important things. It helps to determine how older struggling readers can be supported in the acquisition of literacy skill, how they can learn to process text, how their advanced cognitive abilities can be used as a strength to support their learning, and the role of the teacher in the learning process. It also lends insight as to ways adolescent struggling readers can be supported in the negotiation of expository text through direct text structure instruction, a skill required for success in high school.

Major Findings

Adolescent struggling readers may lack appropriate comprehension (Millis & King, 2001; Palinscar & Brown, 1984; Vaughn, et al., 2001) and text negotiation strategies (Chambliss & Calfee, 1998; Kintsch; 1998; & Meyer et. al., 1980). Therefore, the rationale for this study was that students could effectively learn these strategies through socially and textually assisted performance within an altered environment (Chapman, 1999; Bakhtin, 1986;Clay & Cazden, 1999; Swales, 1990;Vygotsky, 1978). I hypothesized that when adolescent struggling readers received challenging tasks in appropriate text within a supportive discourse community (Swales, 1990), they could accelerate their literacy achievement (i.e. Brown, 1984; Chapman, 1999; Clay & Cazden, 1990; Palinscar & Brown, 1984). The next section explains how the findings from this study fit these theories and contribute to the current research base.

Five major findings emerged from investigating the framework of challenging task in appropriate text for adolescent struggling readers.

1. The framework of challenging task in appropriate text was effective for all ninth graders in the instruction group. I measured this effect using pre and post QRI-3 reading levels in a factorial ANOVA design. While both the instruction and control groups were relatively equal in reading level at pre testing, a considerable difference was seen between the treatment and control groups at post testing ($F(1,28) = 164.639$, $p < .01$). Group by Time post test means on the QRI-3 for the instruction group were 2.331 (QRI-3 Instructional Level 2) and 12.045 (QRI-3 Instructional Level Upper Middle School) respectively, whereas, means for the

control group at pre and post testing were 2.527 and 2.972 respectively (QRI-3 Level 2).

2. Direct text structure instruction was effective for all students in the instruction group as compared to the control group. Students were able to use and transfer their growing knowledge of text structure to formulate oral retellings of exposition in a situation that provided no instructional scaffolding. I measured this effect using pre and post QRI-3 retelling scores in a factorial ANOVA design. A Group by Time interaction indicated that students in the instruction group who received text structure instruction scored meaningfully better than did their peers in the control group ($F (1,28) = 18.369$, $p < .01$). Further, text structure instruction was effective for all students in the treatment group. Students were able to use their growing knowledge of text structure to construct written summaries of the expository texts used in the classroom. To examine the effects of classroom text structure instruction, I used a within groups counterbalanced design. Each week, students took a classroom based assessment with three multiple-choice questions and a question requesting them to summarize the text. Means for group on both the text structure multiple choice and the summarization question indicated a statistically significant effect ($F (1, 20) = 11.556$; $p < 01$; $F (1, 20)=12.330$, $p <.01$, respectively).
3. Direct text structure instruction was more effective for students who received it in the first nine weeks of the instructional period. Students in the TS 1 group were able to maintain and use their knowledge of text structure even after they were no longer receiving the instruction in text structure. Interaction effects for order by

time were observed for both the multiple-choice question (F (17, 340) = 3.456, *p*<.01) and the summarization question (F (17, 340) = 3.315, *p*<.01). Finally, students in the TS 1 group began to answer the inferential multiple choice questions correctly much earlier on in the study than did the TS 2 students.

4. Direct text structure instruction may have increased students’ ability to negotiate and comprehend the most complex and difficult texts used in the study. Students in the second text structure group did better on their summaries when the texts became the most difficult than did the students in the first text structure group. I measured this effect using weighted word counts from students’ weekly summaries (F (17, 340) = 2.465, *p* <.01).
5. The framework of challenging task in appropriate text, which provided appropriate teacher support, goal directed activity, and release of responsibility increased students’ beliefs in themselves as capable readers and their willingness to tackle reading challenges. I measured this effect using the reading efficacy and reading challenge sub-scales from the Motivation for Reading Questionnaire (F (1, 21) =11,142, *p* < .01; F (1, 21) = 11.642, p < .01).

Overall Literacy Growth.

The most important overall outcome of this study is that the framework of challenging task in appropriate text within a smaller discourse community accelerated the literacy growth of adolescent struggling readers, in most cases dramatically, and across gender and whether students received school services. Stanovich (1989) indicated that readers who are confronted with multiple challenges and fall behind their peers are not likely to possess the needed skill to close the gap in literacy ability between themselves and their better achieving peers. However, a study by Aarnouste and Van Leeuwe (2001) indicated that it may be possible for lower achieving students to close this gap. This study directly supported this notion for two reasons. First, all but three students exited the instructional period reading at least at the Upper Middle School Level based on the QRI-3. One of those three students left reading at a QRI-3 level 6, and another missed 27 school days of the second quarter. Further, the students in the instruction group successfully transferred their literacy learning to the QRI-3 post testing measures in a less supportive environment and in contrast to post-test performance of the control group.

This achievement speaks to socially and textually supported learning in a number of ways. First, researchers have suggested that having a repertoire of comprehension and word attack strategies from which to choose, and knowing when and how to use them, supports the reader in the comprehension process (Paris et al., 1983; Pressley & Afflerbach, 1985; Pressley, 2000; Smolkin & Donovan, 2000). Further, these struggling ninth graders were able to learn and practice strategies in a supportive discourse community (Chapman, 1999; Swales, 1990) with appropriate amounts of assisted performance and release of responsibility to students, supporting the constructivist notion of social learning theory (Vygotsky, 1934) as well as goal directed activity (Swales, 1990; Wigfield & Guthrie, 1997).

Second, the interrelationship of social and textual support may have played a key role. The texts themselves appeared to hold students' interest (Chambliss & Calfee, 1998, Guthrie, 2000), while also allowing them to discuss issues stemming from the text at their instructional level. For example, during the reading of the explorers book, the subject of Native American Indians during the Lewis and Clark expedition was mentioned in the text. The small group of second language students who were reading at much lower levels, independently engaged in a discussion of the geographical placement of Incan, Aztec, and Mayan cultures. They questioned me about the differences between North and South American Indians. Together, we drew a map of North and South America on the board (there was no map in the room) and discussed the various cultures. We subsequently found ourselves involved in a discussion of European atrocities committed against both North and South American native cultures. Clearly, this type of discussion went well beyond the text, creating an avenue for higher-level thinking and discussion, while still allowing students to process the text they were reading more fully and contributing to their academic knowledge

This type of cognitive discussion was not uncommon throughout the course of instruction. Students had much to say on many issues they pulled from text. I found that these discussions sometimes challenged my own factual knowledge and thinking skills. At times, when I was unable to answer questions, we engaged in internet searches, leading us into an understanding of critical literacy as it applied to the internet. Student discussions also challenged my abilities as a reading specialist. While I wanted to allow conversation to continue, I also had to make decisions about when to stop the discussions and return to the guided reading of the text. This is just one example of the ways that social and textual support can work together to assist adolescent struggling readers with comprehension and higher-level thinking skills.

Finally, other features of the text may have provided support to students. Because I chose text that had clear rhetorical patterns and text features such as indexes, glossaries, and tables of contents, students were able to learn how to use the tools provided in the text to support their comprehension. After such features had been taught and learned, students began using them independently to answer teacher directed as well as self-initiated questions.

Overall Effectiveness of Text Structure Instruction

Students in the instruction group were able to use their text structure knowledge in two ways: in their written summaries and in their retellings. It is important to note that I did not directly teach writing or retelling as strategies during the entire course of instruction. Students could use the text to formulate written summaries, but I did not teach them how to organize their writing. During the retellings, students could not use the text, so they had even less support.

This finding supports and extends text processing models (i.e., Chambliss, 1995; Meyer, 1985) into the realm of direct instruction. Brown, Day, and Jones (1983) hypothesized that when students were familiar with text, they would be able to produce more accurate representations of text. They also indicated that one of the ways familiarity with genre could be accomplished was by assisting students in developing cognitive and metacognitive text-processing skills through appropriate learning activities, echoing the notions of Swales (1990), Chapman (1999), and Wigfield et al. (2000). A number of researchers looked at how good readers process text and found that good readers possess and use rhetorical patterns in text as a comprehension tool (i.e. Brown et al., 1983; Chambliss, 1990, 1995; Meyer et. al., 1980; Winograd, 1984). This study indicated that direct instruction can assist students in gaining and using knowledge of these patterns. It also indicated that multiple structures can be simultaneously taught, practiced, and learned.

After the intensive instruction in text structure, the ninth graders in this study were able to identify and use structures with more complex hierarchical links, such as a matrix or a falling dominoes pattern. Brown, et al (1984), found that although younger children could represent gist, as task demands increased, they were less able to summarize concisely and tended to copy the most important information from the text verbatim, deleting what they felt to be unimportant. From this outcome, the researchers concluded that in order to represent gist accurately, students had to use multi-leveled comprehension and textual integration processes. As students created summaries, they integrated and applied the complex comprehension processes needed for success within the genre of classroom texts used in the high school discourse community (Bakhtin, 1986; Chapman, 1999; Swales, 1990). Because of the length of the texts (some contained more than 50 pages of complex information), it would not have been possible for students to continue to use a copy/delete strategy (Brown et al., 1983) and still retell or write a condensed summary of text. This outcome indicated that they were, in fact, engaged in higher order metacognitive processing and metadiscourse with and about the text.

Finally, Chambliss (1995) studied students' knowledge of exposition designed as a topical net or as an argument (Toulmin, 1958) and their ability to comprehend arguments according to a model with three phases. Chambliss and Murphy (2002) studied the rhetorical patterns that fourth graders use to represent a text structured as an argument, and Chambliss, Christenson, and Parker (2003) studied student ability to write explanations. The methodologies used for text structure instruction as well as the rubric for scoring both summaries and retellings extended their research by allowing me to study more than one or two patterns in text at a time. This study looked at student ability to extract structure from text across all of the rhetorical patterns in the Chambliss and Calfee (1998) model. The summary rubric tool allowed me to look at students' thinking and understanding of text structure at a higher level of abstraction.

Use of Text Structure Knowledge over Time

Students who had participated in text structure instruction first were able to maintain and use their knowledge of text structure even after they were no longer receiving the text structure instruction. This finding supports and extends the work of other researchers. Once students had learned the rhetorical patterns, they could identify them in text, use them to construct a mental representation of the text, and use them to write a summary (i.e.; Meyer & Poon, 2001; Meyer, Brandt & Bluth, 1980). According to Swales (1990) and Bakhtin (1986), this knowledge was situated within a discourse community and used for a specific purpose.

Chambliss and Murphy (2002) as well as Duke and Kays (1998) found that even young readers possessed some fundamental knowledge of text structure. It is logical to assume that as students in this study learned to use the multiple patterns in text, and their knowledge of these patterns increased, they were becoming better able to participate in the larger high school discourse community (Bruner, 1986; Bakhtin, 1986; Swales, 1990), because they possessed a greater personal knowledge of high school genres. Further, because readers who studied text structure first continued to apply their acquired knowledge of text structure, this study also indicated that students were able to transfer knowledge of text structures to new texts and new situations, indicating that their need for the smaller discourse community was diminishing (Bakhtin, 1986; Swales, 1990).

Use of Text Structure as a Tool for Content Knowledge Acquisition.

Students who studied text structure second did have one advantage. Their text structure knowledge continued to be instructionally scaffolded as texts became more conceptually dense, represented multiple rhetorical patterns, and increased in vocabulary and overall reading difficulty. All students in the instruction group were reading this difficult material by the end of the 18 weeks. Students who received text structure second appeared to have a firmer grasp on content knowledge acquisition than did students who were not scaffolded through difficult texts via text structure instruction. This finding supports research suggesting that readers can use rhetorical patterns in text as a tool for learning (i.e. Chambliss & Murphy, 2002; Chapman, 1999; Meyer & Poon, 2001; Swales, 1990).

Using structure as a comprehension tool in this study did two things. First, it aided students in understanding how the author had organized the text. Second, because the structures were not taught devoid of content, it may have also aided students in understanding the content information presented in text. As Brown et al. (1984) indicated, "engineering situations where students will be likely to engage in overt activities that reflect cognitive processes" (p. 970) may allow students to begin to understand deliberate strategic processing. This theory echoes the work of Bakhtin (1986), Swales (1990), and Chapman (1999). As students grappled with the rhetorical patterns in text, learning how to represent them graphically, they were also representing and solidifying difficult content knowledge. Chambliss and Calfee (1998) proposed that "comprehensibility serves as a gatekeeper. Readers who comprehend a text have a chance of learning from it" (p 43). Perhaps scaffolding students through both structure and content allowed the more difficult texts used in the study to become comprehensible and therefore accessible to students. Students who studied text structure second had this support. Students who studied it first did not.

The Role of Motivation

This study found that students' reading efficacy and reading challenge increased. These findings added credence to theories of competence support, and task and goal directed learning (Skinner, Wellborn & Connell,1990; Swales, 1990; Wigfield & Guthrie 1997). It also directly related to the importance these researchers placed on the role of the teacher as the expert within the discourse community, and students' perceptions of that role (Bakhtin, 1986; Chapman, 1999; Skinner, Wellborn & Connell, 1990; Swales, 1990; Vygotsky, 1978). This finding is important because often reader choice is perceived as one of the most important factors in relation to intrinsic motivation (i.e. Baker, Dreher & Guthrie, 2000). While I do not doubt the importance of choice, this study indicated that students did acquire intrinsic motivation in terms of their beliefs about themselves as competent readers. Topic choice in reading was not part of this study. Therefore, increases in motivation had to have been supported other ways. The expectation throughout instruction was that all students would become communicatively competent within the discourse community (Swales,1990). We engaged in goal and task oriented activities that best supported their processes of gaining literacy skill.

This finding also extended the research base in motivation in two ways. First, this study indicated that adolescent struggling readers can increase their intrinsic motivation for reading. Second, Wigfield and his colleagues have used the Motivation for Reading Questionnaire (Wigfield et al, 1996) with elementary students and have studied motivation in other ways with students in grade six or lower. In this study, I used the MRQ and the theory of competence support to look at the intrinsic motivation of adolescent struggling readers. This is a very telling finding because researchers often conclude that motivation for reading drops off as children reach adolescence (Baker, et al., 2000 ; Wigfield et al., 1997.

Summary

All students in the instruction group were able to increase their literacy growth rapidly within the framework of challenging task in appropriate text when strategy acquisition was combined with assisted performance in task through text in an appropriate environment. Students who studied text structure first were able to transfer their growing knowledge of text structure instruction to new texts and learning situations. However, students who studied text structure second appeared to have gained more content knowledge in difficult text because they continued to receive the text structure instruction as they were learning to negotiate these more challenging texts. Finally, this study indicated that students' motivation for reading increased because their beliefs in their own abilities as readers increased from the beginning to the end of the instructional time frame.

Directions for Future Research

This dissertation is large and could take many directions. However, I propose a number of broad suggestions for future research. I make the most suggestions for research that would aid in better understanding adolescent struggling readers, one suggestion for research that would aid in understanding the relationship between text processing and pedagogy, and a few suggestions relating to the measures used.

The first is obvious. The framework of challenging task in appropriate text needs further study and validation. This requires a study similar to the training studies by Palinscar and Brown (1984) in which they trained other teachers to implement their model of reciprocal teaching, leading to three research questions. First, can the framework be used by other teachers and with a larger number of students? Second, can the framework be used by other professionals with the same result? Third, would training studies with more teachers and more students that allow for a much larger sample, provide more insight into any effects the framework may have on gender or school services?

My second suggestion relates directly to the first. Cell sizes were not adequate to statistically differentiate across stratifications. However, the study does suggest that special education and second language students, including those who were Spanish illiterate, made more progress than did the regular education students because the former began instruction at much lower reading levels. This intriguing outcome suggests the need for more research with both non-native speakers and special education populations. Both groups of students excelled within the framework of challenging task in appropriate text. Comparative research with other educational models in use may shed light on better ways to assist special education and second language students in the development of communicative competence.

A third question to be answered is whether or not daily intervention could be shorter. The QRI-3 given at mid-point in the instruction indicated statistical significance, but because it was a written test administered at one level, it may have underestimated mid-point reading growth, particularly for those students who began the program at a

QRI-3 level 3 or higher. Knowledge of how long students need to stay in a daily intensive program, and whether they could maintain acquired skill with a maintenance program, would assist educators in designing cost-effective intervention programs.

Outcomes from this study suggest that it is critical to follow students longitudinally. The study could be replicated with readers of a similar age group in order to follow their progress throughout their high school careers. Finding out whether the reading intervention had any effect on students' abilities to meet the demands of regular classroom instruction better is crucial.

The fifth suggestion I make has to do with the framework itself. In this study, I presented the framework as a complete entity. I was able to look at the effects for text structure and found direct instruction in text structure to be a value-added component. It would also be important to determine what, if any, independent effects existed for the rereading phase or for the many different instructional strategies used within the second phase of comprehension strategy instruction. Both the rereading and comprehension strategy phases appeared to have been effective methodological tools. Therefore, it may be insightful to study each of these phases of the framework to determine the effects on the accelerated literacy growth of struggling adolescent readers.

The sixth and final suggestion I make is further study of text processing models, such as the use of the Chambliss and Calfee's (1998) text taxonomy in direct relationship to instruction. This study leads to preliminary findings that direct text structure instruction assisted students in the formulation of better summaries, of deepened acquisition of content knowledge, and of better comprehension skills. Student's active manipulation of the rhetorical patterns of text (Chapman, 1999) as a tool for teaching and learning is worth further study with adolescent readers.

Both the QRI-3 and the Retelling and Summary Scoring Rubric were effective measures in this study. Therefore, I propose two suggestions for research relating to these measures. First, while the QRI-3 has been used in research (e.g., Leslie & Allen, 1999; Paris & Paris, 2003), I would propose studies validating the tool as a measure of reading growth. Paris and Paris (2003) have begun some of this work with informal reading inventories in narrative text. It could be expanded to include exposition.

Because the QRI-3 or other published informal reading inventories may be better estimates of literacy ability than standardized tests (McCabe, 2001; McCormick, 1999), it may prove useful to continue a line of research that validates them as a tool that can be used on a continuous sliding scale to measure reading ability. While this study used a sliding scale, it did so only for overall reading achievement and with one group of students. It may be possible to use similar continuous numeric scales to measure separate pieces of the QRI-3, while maintaining more ecological and construct validity than standardized tests provide. For example, the miscue analysis, retellings, and comprehension questions could be validated as separate instruments and correlated.

Finally, I was pleased with the results the Summary and Retelling Scoring Rubric brought as an instrument of measuring text processing with two different outcome measures: student summaries and student retellings. Outside raters were able to understand and use it with ease for both measures. Because it was successful across two quite different measures, I would suggest that the process of validating the tool be continued as well as used in future studies as another possible way for understanding how students process text.

Limitations

This study introduced a framework for assisting adolescent struggling readers in increasing their overall literacy skill embedded within specially designed discourse communities. Within that framework, it looked directly at the effects of text structure instruction and motivation for a group of ninth grade students in the instructional group. However, as with any research, the positive outcomes and research implications discussed above also present limitations.

Situating Myself as the Expert within the Discourse Community

The biggest implication this study makes is that it is possible to accelerate the literacy growth of adolescent readers who neither decode nor comprehend anywhere near grade level. It is possible that students in the instruction group did as well as they did because rapport and a mutual environment of caring was established. I expected all students to become readers. If this expectation carried over into the research results, then I have achieved important pedagogical and research goals. Having a caring teacher undoubtedly had a positive effect in this study (Guthrie, Dreher & Baker, 2000; Skinner, et al., 1990), particularly for otherwise marginalized students (Morris, 2004). What could be viewed as the greatest limitation to this study as a research design can also be seen as its greatest advantage.

Because of the small-group environment, I became a trusted adult and confidant. I assisted students with projects outside the classroom. For example, one young lady was to read a poem she had written on the university campus as part of a joint project with the school. She came to the room after lunch for a week, and we practiced strategies for accomplishing this goal. I also allowed students to use the classroom computer during my free period to work on projects for other classes, and periodically assisted them with outside assignments. In fact, the students, particularly second language learners, would bring their friends to my room requesting help and guidance.

The theory of discourse communities (Bakhtin, 1986; Swales, 1990) clearly defined my role as the expert within the discourse community. Because of my role as the expert, lines become blurred between how much of the success in the instruction group was due to the framework of challenging task in appropriate text and how much was due to students' relationships with myself as the teacher. I believe that both played important roles. My role as a teacher fell within the theories of competence support (Swales; 1990; Wigfield et al, 2000), and social learning theory (Bakhtin, 1986; Vygotsky, 1934). As suggested in the implications for research section, one way to tease apart these effects would be through a training study, where other teachers learned to use and implement the framework.

I paid particular attention to the effect of my role as the expert on QRI-3 results in the pre-post control conditions. For two reasons, I doubt that personal bias had any dramatic effect on the testing situation. First, the correlation between the post QRI-3 scores for the instruction and control groups was $r = .851$ ($p < .01$). Second, it is not likely that this effect would have been as great in either the treatment or control groups had researcher bias been the only reason for students' success or lack of success at post assessment.

Inferential Statistics and Design

This study presents one design as well as one statistical limitation. Although results indicated that student's intrinsic motivation increased, this design was quasi-experimental. It was logistically impossible for me to administer the Motivation for Reading Questionnaire to the control group at the beginning and end of the instructional period.

Second, as suggested, this study points to the possibility that there could have been positive but differentiated across school services. Cell sizes for the factorial ANOVAs across stratifications needed to be larger to provide statistical data to support such a finding. I have reported descriptive statistics for the stratifications in this study. However, they must be interpreted with care. A replication study with more teachers and students would make it possible to determine any differentiated effects across gender as well as across school services.

Finally, the question of generalizability remains unanswered. Although there were statistical and design controls in place, whether the instruction would be effective under different circumstances must be answered. It would be valuable to determine whether the instructional framework would be successful under varied conditions such as group size and length of instruction.

Suggestions for Instruction

The findings of this study have instructional implications on two levels: classroom pedagogy and school-wide organization. The first suggestion has been made by other researchers (e.g., Moore et al., 2000) and is the most obvious. Teachers across subject areas can be teaching a variety of reading strategies that assist students not only in the negotiation of text but also in the acquisition of content knowledge.

One such strategy that seemed to be particularly effective was the direct teaching of text structure. Teachers could use this strategy not only to help students understand structure and content, but also to aid them in learning to write in the content areas. Teaching readers to use graphic organizers is similar to the use of graphic organizers in the teaching of writing (Capretz, Ricker, & Sasak, 2003; Robinson & Kiewra, 1995; Weisberg & Balajthy, 1990; Vacca & Vacca, 2002) but goes one step further because it is also teaching the structure of a particular genre as well as the comprehension of text within that subject area. Results of this study indicated that students in the second text structure group were able to use more technical content vocabulary because they were scaffolded through both content and structure. Research indicates that teaching text structure aids students in understanding content genres (i.e. Armbruster & Anderson, 1980). In using text structure to help students understand how authors organize exposition, they may also be solidifying conceptual and content area knowledge if conceptually dense texts are used to teach the rhetorical patterns of text.

Direct guided reading could also be used as a teaching strategy to assist students with understanding how to negotiate text, how to extract both literal and inferential information from text, how to chunk text to make it comprehensible in smaller sections, as well as how to use a variety of reading comprehension strategies within content area classes. Results of this study indicated that when students were encouraged to think about text in various ways and using a number of strategies, such as inferential questioning and reading a small section of text for a specific purpose, that their ability to answer both literal and inferential text-based questions improved. In content area classes, teachers could model and scaffold students through the learning and use of such strategies as they pertain to the textbook.

Second, assisting adolescent readers to be challenged through task within a text they can negotiate with assistance is important. At the high school level, very often struggling readers cannot negotiate difficult textbooks. Allowing them to use their strengths to build their reading skill in appropriately leveled text seems an obvious conclusion.

The larger implication lies within school-wide structure. The framework of challenging task in appropriate text was successful in a small-group setting within a high school, suggesting a need for reading specialists at both the middle and high school levels who work directly with students. Often, high school personnel cite budgetary concerns. However, I was able to see 22 students daily, and had the potential for seeing 36. If 36 students can be seen by one reading specialist each school quarter, over 100 students, or the bottom third of most incoming ninth-grade classes, could receive intervention provided by one reading specialist.

Another concern often given is the problem of adding a class to the overall high school schedule. In this study, we did so by identifying students prior to their enrollment in ninth grade. They were able to receive one elective high school credit for the reading course. There may also be ways to schedule high school English, Special Education, and Second Language classes so that students could participate in small group intervention as part of their regular courses of study. The administration at the school where I conducted this study created a way for the reading class to happen, leading me to believe that such possibilities do exist at the high school level if administrators are willing to be creative with scheduling.

Another possibility would be to implement this instruction as a regular class at the middle school level where language arts instruction is often delivered in larger blocks of time. This way, groupings could be flexible across teachers.

Conclusion

Poor literacy performance of adolescent struggling readers can be caused by any number of factors. The absence of intervention at this level combined with a lack of understanding of older struggling readers leaves adolescents with no avenues for acquiring literacy skill and experiencing success. However, the use of a framework for allowing students to be challenged via task in text that they could read with assistance in a small group discourse community provided evidence that older struggling readers were able to accelerate their literacy skill when the right conditions were present.

Regardless of budgetary or scheduling concerns, the results of this study speak directly to the need for and success of intensive small-group literacy intervention at the middle and high school levels. A strong focus on comprehension skill with an even stronger focus on the use of text structure as a comprehension tool, combined with a supportive and reflective teacher was successful for the ninth graders in this study.

APPENDIX A

Model used for Text Graphing

The design of rhetorical patterns used in expository writing. (Chambliss & Calfee, 1998, p. 32) (Reprinted with permission.)

32 THE CHARACTERISTICS OF WELL-DESIGNED TEXTBOOKS

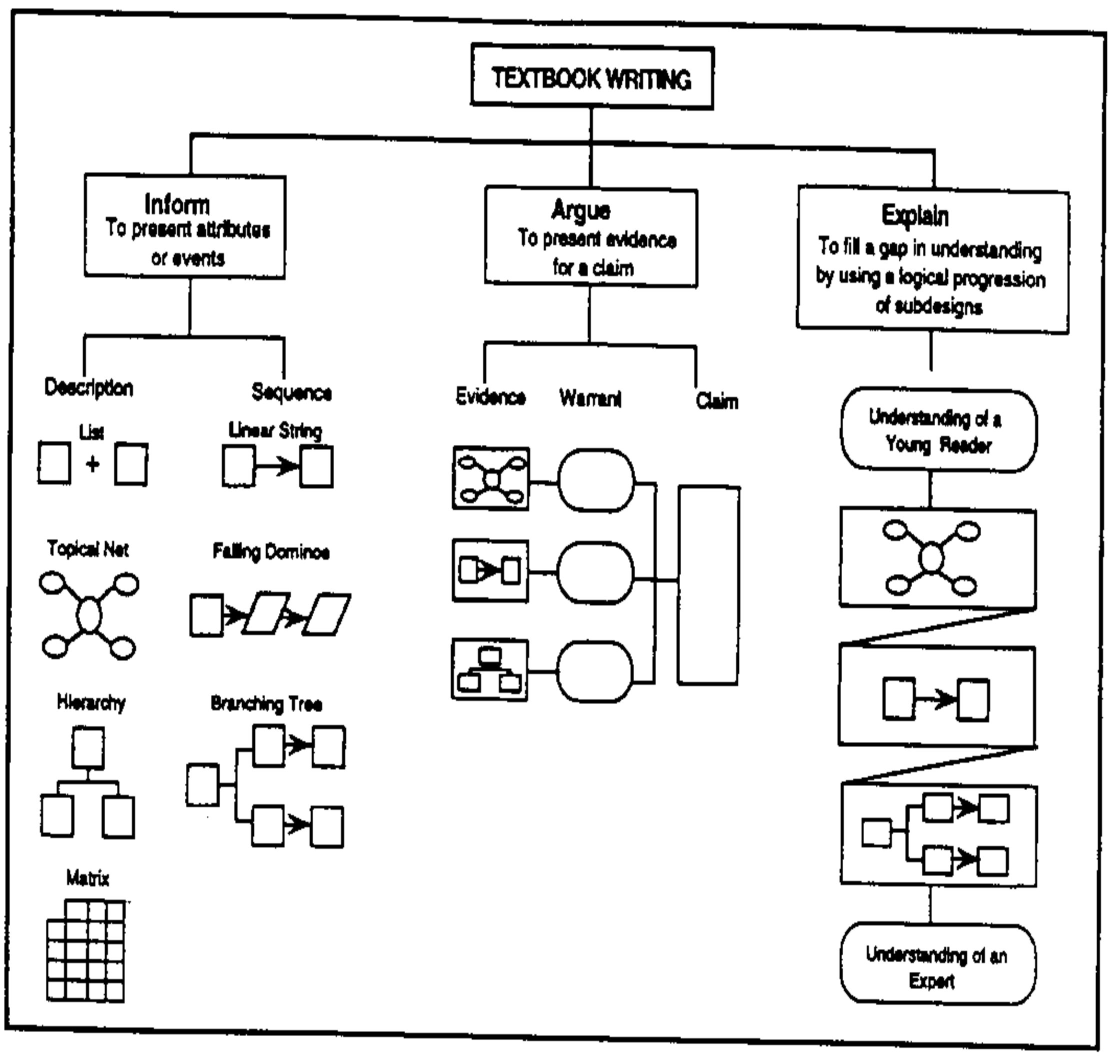


Figure 2.4 The design of the rhetorical patterns used in expository writing.

APPENDIX B

Bibliography of Instructional Texts Used

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APPENDIX C

Directions, Scoring and Motivation for Reading Questionnaire

APPENDIX

MOTIVATIONS FOR READING QUESTIONNAIRE

Administration and Scoring

The Motivations for Reading Questionnaire (MRQ) measures different dimensions or aspects of elementary school-aged children's reading motivations. It can be used to discover the nature of children's motivations for reading, as well as some of the things about reading children do not find motivating. It consists of 54 items, and can be administered in 20 to 25 minutes. It can be used in conjunction with the Reading Activity Inventory developed by Guthrie et al. (1994).

The MRQ appears following these instructions. It may be photocopied for use in the classroom.

Administration

Before you distribute the MRQ forms, tell students you are interested in finding out what they think and feel about reading as an activity. Assure the students that there are no right or wrong answers to the questions, and that children sitting near them might answer an item differently. Encourage the students to answer the questions honestly. The measure is designed to be given to a classroom-size group; it also can be given in smaller groups. Individual administration generally is not necessary.

For third- and fourth-grade children, it is recommended that the MRQ be read aloud (if all students in a fourth-grade class read well, then they could complete the questionnaire on their own). Fifth- and sixth-grade children can read the questions on their own, but the administrator should be prepared to answer any questions they have about some of the words contained in the different items.

A cover page can be added to the questionnaire to get demographic and other information, if that is desired. The first page of the questionnaire contains three sample questions that are there to familiarize children with the 1 to 4 answer scales used. The class should complete these sample items before answering the items on the questionnaire itself. The administrator should emphasize to children to use the full range of the 1 to 4 scale.

Scoring

Each item is scored on a 1 to 4 scale; higher scores mean stronger endorsement of the item. A total score can be derived by summing the scores of all the items (with the exception of the Work Avoidance items; these should NOT be included in a summary score). However, we strongly recommend deriving separate scores for each of the proposed dimensions of reading motivations. The scale scores provide much more information than a total score does. Specifically, they provide information about the pattern of children's responses and how they rate different aspects of their motivation for reading. These profiles could be quite useful for teachers and reading specialists interested in understanding what things children like about reading and what things they don't like about it.

SPECIFIC STEPS FOR SCORING THE INSTRUMENT BY HAND

1. Check each questionnaire to be sure that each student completed each item. If some items are left blank, they of course should not be included in the scoring of the instrument. Each item that is completed should be scored from 1 to 4.

2. If a student circled more than one answer for an item and the answers are adjacent (e.g., circled both 1 or 2; or 3 or 4), take the number closer to the middle. However, if both 1 and 4 were circled, that item should not be counted.

3. If a student added numbers to the scale (e.g., the student wrote in numbers less than 1, or greater than 4), convert them to the scale. Numbers less than 1 can be scored as 1; numbers greater than 4 can be scored as 4.

3. To create scale scores, use Table 1 to identify the items in each scale. Add the students' responses to the items in each scale (e.g., in the case of the Efficacy items, add the scores from the four items shown in Table 1), and divide by the number of items completed (e.g., in the case of the efficacy scale, divide by 4, if all the items were completed by the student). Dividing by the number of items on each scale means that all the scale scores also will have a range of 1 to 4, which makes them easier to compare.

4. For the Compliance scale, the first two items should be reversed before computing the scale for Compliance. That is, a score of 1 should be converted to 4, a score of 2 converted to 3, a score of 3 converted to 2, and a score of 4 converted to 1.

SPECIFIC STEPS FOR SCORING THE INSTRUMENT BY COMPUTER

The scales also can be created using different statistical packages, such as SPSS.

1. Follow steps 1 through 3 above.

2. To create scale scores, use Table 1 to identify the items in each scale. Use your computer program to add the appropriate items for each scale, being sure to reverse the first two items on the Compliance scale.

3. The scale scores can be saved on the computer for later use and analysis.

Interpretation

The scores can be used in several ways. First, individual profiles of the students completing the questionnaire can be examined. This profile can help give an indication of the kinds of things a child is motivated by. For instance, does s/he read primarily for curiosity, or to get good grades? Does s/he like to be challenged by reading assignments? These profiles could be used to tailor the curriculum to meet better individual student needs, or perhaps to provide special activities for different students. For instance, children who strongly endorse the "challenge" items could be given some especially involved assignments. Children strongly endorsing the "recognition" items could be given the opportunity to receive some recognition for their work. Children strongly endorsing "social reasons for reading" could be allowed to read more with their peers. Second, the scores also could be grouped, and group differences could be examined, to answer questions like are the boys more positively motivated than the girls? Or do boys and girls have different things that appear to motivate them most in their reading? Third, the measure could be given twice or three times over a school year, and patterns of change in different children's motivations could be assessed.

The Motivations For Reading Questionnaire

DIRECTIONS:

We are interested in your reading.

The statements tell how some students feel about reading.

Read each statement and decide whether it talks about a person who is like you or different from you.

There are no right or wrong answers. We only want to know how you feel about reading.

Here are three examples.

If the statement is **very different from you**, circle a 1.

If the statement is **a little different from you**, circle a 2.

If the statement is **a little like you**, circle a 3.

If the statement is **a lot like you**, circle a 4.

	Very Different From Me	A Little Different From Me	A Little Like Me	A Lot Like Me
1. I like ice cream.	1	2	3	4
2. I like to swim.	1	2	3	4
3. I like spinach.	1	2	3	4

CIRCLE ONE ANSWER FOR EACH QUESTION, USING THESE ANSWERS:

1. Very different from me
2. A little different from me
3. A little like me
4. A lot like me

1. I visit the library often with my family.	1	2	3	4
2. I like hard, challenging books.	1	2	3	4
3. I know that I will do well in reading next year.	1	2	3	4
4. I do as little schoolwork as possible in reading.	1	2	3	4
5. If the teacher discusses something interesting I might read more about it.	1	2	3	4
6. I read because I have to.	1	2	3	4
7. I like it when the questions in books make me think.	1	2	3	4
8. I read about my hobbies to learn more about them.	1	2	3	4
9. I am a good reader.	1	2	3	4
10. I read stories about fantasy and make believe.	1	2	3	4
11. I often read to my brother or my sister.	1	2	3	4
12. I like being the only one who knows an answer in something we read.	1	2	3	4
13. I read to learn new information about topics that interest me.	1	2	3	4
14. My friends sometimes tell me I'm a good reader.	1	2	3	4
15. I learn more from reading than most students in my class.	1	2	3	4
16. I like to read about new things.	1	2	3	4
17. I like hearing the teacher say I read well.	1	2	3	4
18. I like being the best at reading.	1	2	3	4

CIRCLE ONE ANSWER FOR EACH QUESTION, USING THESE ANSWERS:

1. Very different from me
2. A little different from me
3. A little like me
4. A lot like me

19. I look forward to finding out my reading grade.	1	2	3	4
20. I sometimes read to my parents.	1	2	3	4
21. My friends and I like to trade things to read.	1	2	3	4
22. It is important for me to see my name on a list of good readers.	1	2	3	4
23. I don't like reading something when the words are too difficult.	1	2	3	4
24. I make pictures in my mind when I read.	1	2	3	4
25. I always do my reading work exactly as the teacher wants it.	1	2	3	4
26. I usually learn difficult things by reading.	1	2	3	4
27. I don't like vocabulary questions.	1	2	3	4
28. Complicated stories are no fun to read.	1	2	3	4
29. I am happy when someone recognizes my reading.	1	2	3	4
30. I feel like I make friends with people in good books.	1	2	3	4
31. My parents often tell me what a good job I'm doing in reading.	1	2	3	4
32. Finishing every reading assignment is very important to me.	1	2	3	4
33. I like mysteries.	1	2	3	4
34. I talk to my friends about what I am reading.	1	2	3	4

CIRCLE ONE ANSWER FOR EACH QUESTION, USING THESE ANSWERS:

1. Very different from me
2. A little different from me
3. A little like me
4. A lot like me

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35. If I am reading about an interesting topic, I sometimes lose track of time.	1	2	3	4
36. I like to get compliments for my reading.	1	2	3	4
37. Grades are a good way to see how I'm doing in reading.	1	2	3	4
38. I like to help my friends with their schoolwork in reading.	1	2	3	4
39. I read to improve my grades.	1	2	3	4
40. My parents ask me about my reading grade.	1	2	3	4
41. I enjoy a long, involved story or fiction book.	1	2	3	4
42. I like to tell my family about what I am reading.	1	2	3	4
43. I try to get more answers right than my friends.	1	2	3	4
44. If the project is interesting, I can read difficult material.	1	2	3	4
45. I enjoy reading books about people living in different countries.	1	2	3	4
46. I read a lot of adventure stories.	1	2	3	4
47. I always try to finish my reading on time.	1	2	3	4
48. If a book is interesting, I don't care how hard it is to read.	1	2	3	4
49. I like to finish my reading before other students.	1	2	3	4
50. In comparison to my other school subjects, I am best at reading.	1	2	3	4

CIRCLE ONE ANSWER FOR EACH QUESTION USING THESE ANSWERS:

1. Very different from me
2. A little different from me
3. A little like me
4. A lot like me

51. I am willing to work hard to read better than my friends.	1	2	3	4
52. I don't like it when there are too many people in the story.	1	2	3	4
53. It is very important to me to be a good reader.	1	2	3	4
54. In comparison to other activities I do, it is very important for me to be good at reading.	1	2	3	4

APPENDIX D

Means and Standard Deviations for Time: Literal Multiple Choice Question

Time: Literal Question

Question Number	Mean	Standard Deviation
1	1.0	.000
2	0.908	.254
3	0.950	.212
4	1.0	.000
5	1.0	.000
6	0.917	.248
7	1.0	.000
8	0.958	.214
9	1.0	.000
10	0.958	.214
11	0.958	.214
12	0.958	.214
13	1.0	.000
14	1.0	.000
15	1.0	.000
16	1.0	.000
17	0.950	.000
18	1.0	.000

Group by Time Interaction

Question	Group	Mean	Standard Deviation
1	TS1	1.0	.000
	TS2	1.0	.000
2	TS1	0.900	.316
	TS2	0.916	.288
3	TS1	0.900	.316
	TS2	1.0	.000
4	TS1	1.0	.000
	TS2	1.0	.000
5	TS1	1.0	.000
	TS2	1.0	.000
6	TS1	1.0	.000
	TS2	0.833	.389
7	TS1	1.0	.000
	TS2	1.0	.000
8	TS1	1.0	.000
	TS2	0.916	.288
9	TS1	1.0	.000
	TS2	1.0	.000
10	TS1	1.0	.000
	TS2	0.916	.288

11	TS1	1.0	.000
	TS2	0.916	.288
12	TS1	1.0	.000
	TS2	0.916	.288
13	TS1	1.0	.000
	TS2	1.0	.000
14	TS1	1.0	.000
	TS2	1.0	.000
15	TS1	1.0	.000
	TS2	1.0	.000
16	TS1	1.0	.000
	TS2	1.0	.000
17	TS1	0.900	.316
	TS2	1.0	.000
18	TS1	1.0	.000
	TS2	1.0	.000

**Note:* Range: 0-1.

APPENDIX E

Means and Standard Deviations for Time: Inferential Multiple Choice Questions

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Time: Inferential Question

Question Number	Mean	Standard Error
1	0.900	.246
2	0.517	.324
3	0.867	.277
4	0.767	.304
5	0.958	.214
6	1.0	.000
7	0.833	.279
8	1.0	.000
9	1.0	.000
10	0.958	.214
11	0.950	.212
12	0.908	.254
13	0.958	.214
14	0.950	.212
15	0.950	.212
16	1.0	.000
17	0.958	.214
18	0.867	.277

Group by Time Interaction

Question	Group	Mean	Standard Deviation
1	TS1	0.800	.421
	TS2	1.0	.000
2	TS1	0.700	.483
	TS2	0.333	.492
3	TS1	0.900	.316
	TS2	0.833	.389
4	TS1	0.700	.483
	TS2	0.833	.389
5	TS1	1.0	.000
	TS2	0.916	.288
6	TS1	1.0	.000
	TS2	1.0	.000
7	TS1	1.0	.000
	TS2	0.666	.492
8	TS1	1.0	.000
	TS2	1.0	.000
9	TS1	1.0	.000
	TS2	1.0	.000
10	TS1	1.0	.000
	TS2	0.916	.288
11	TS1	0.900	.316
	TS2	1.0	.000

12	TS1	0.900	.316
	TS2	0.916	.288
13	TS1	1.0	.000
	TS2	0.916	.288
14	TS1	0.900	.316
	TS2	1.0	.000
15	TS1	0.900	.316
	TS2	1.0	.000
16	TS1	1.0	.000
	TS2	1.0	.000
17	TS1	1.0	.000
	TS2	0.916	.288
18	TS1	0.900	.316
	TS2	0.833	.389

Note: Range: 0-1

APPENDIX F

Means and Standard Deviations for Time: Text Structure Multiple Choice Questions

Question: Text Structure

Question Number	Mean	Standard Error
1	0.675	.103
2	0.692	.102
3	0.442	.076
4	0.733	.099
5	0.875	.072
6	0.625	.072
7	0.600	.108
8	0.725	.100
9	0.533	.077
10	1.0	.000
11	0.775	.094
12	0.950	.045
13	0.767	.093
14	0.808	.083
15	0.867	.077
16	0.867	.077
17	0.958	.046
18	0.858	.076

Group by Time Interaction

Question	Group	Mean	Standard Deviation
1	TS1	0.600	.516
	TS2	0.750	.452
2	TS1	0.800	.421
	TS2	0.583	.514
3	TS1	0.800	.421
	TS2	0.833	.288
4	TS1	0.800	.421
	TS2	0.667	.492
5	TS1	1.0	.000
	TS2	0.750	.452
6	TS1	1.0	.000
	TS2	0.250	.452
7	TS1	0.700	.483
	TS2	0.500	.522
8	TS1	0.700	.483
	TS2	0.500	.522
9	TS1	0.900	.316
	TS2	0.166	.389
10	TS1	1.0	.000
	TS2	1.0	.000
11	TS1	0.800	.421
	TS2	0.750	.452

12	TS1	0.900	.316
	TS2	1.0	.000
13	TS1	0.700	.483
	TS2	0.833	.389
14	TS1	0.700	.483
	TS2	0.916	.288
15	TS1	0.900	.316
	TS2	0.833	.389
16	TS1	0.900	.316
	TS2	0.833	.389
17	TS1	1.0	.000
	TS2	0.916	.288
18	TS1	0.800	.421
	TS2	0.916	.288

Note: Range: 0-1

APPENDIX G

Means and Standard Deviations for Time: Student Summaries

Time: Student Summary

Week	Mean	Standard Deviation
1	6.400	.631
2	4.292	.786
3	3.717	.727
4	5.783	.746
5	4.850	.658
6	5.908	.648
7	5.167	.695
8	6.092	.780
9	4.942	.742
10	6.533	.689
11	7.092	.756
12	6.975	.588
13	6.525	.677
14	6.158	.707
15	6.308	.681
16	5.675	.656
17	7.067	.699
18	6.842	.757

Group by Time Interaction

Question	Group	Mean	Standard Deviation
1	TS1	6.800	1.316
	TS2	6.000	2.215
2	TS1	6.500	3.240
	TS2	2.166	2.724
3	TS1	4.600	2.796
	TS2	2.800	2.167
4	TS1	7.900	2.131
	TS2	4.000	2.984
5	TS1	5.700	1.888
	TS2	4.000	2.132
6	TS1	7.400	2.011
	TS2	4.750	2.005
7	TS1	7.500	2.415
	TS2	2.833	2.124
8	TS1	7.100	1.728
	TS2	5.083	3.502
9	TS1	6.300	2.983
	TS2	3.583	2.193
10	TS1	6.400	1.646
	TS2	6.666	2.605
11	TS1	7.600	2.633
	TS2	6.666	2.674

12	TS1	6.800	1.398
	TS2	7.250	1.764
13	TS1	6.800	1.316
	TS2	6.250	2.632
14	TS1	6.400	2.633
	TS2	5.916	2.065
15	TS1	6.200	1.932
	TS2	6.416	2.353
16	TS1	5.100	1.663
	TS2	6.250	2.261
17	TS1	6.800	2.394
	TS2	7.333	2.188
18	TS1	7.100	2.131
	TS2	6.583	3.058

Note: Range: 0-11 using the retelling and summary scoring rubric

APPENDIX H

Means and Standard Deviations for Time: Word Count

Week	Mean	Standard Deviation
1	30.916	4.735
2	40.587	6.226
3	39.581	4.256
4	38.931	3.220
5	46.316	4.296
6	53.656	5.280
7	60.352	9.218
8	67.270	5.580
9	90.591	10.916
10	83.197	5.597
11	126.346	18.451
12	115.033	12.776
13	86.981	9.655
14	89.281	7.652
15	118.721	10.817
16	124.409	12.119
17	154.103	14.923
18	174.000	25.564

Week	Group	Mean	Standard Deviation
1	TS1	39.040	18.495
	TS2	22.791	24.685
2	TS1	35.940	30.748
	TS2	45.233	27.640
3	TS1	31.470	20.167
	TS2	47.691	19.638
4	TS1	32.670	18.236
	TS2	45.197	11.797
5	TS1	46.040	15.031
	TS2	46.591	23.394
6	TS1	52.120	21.799
	TS2	55.191	26.779
7	TS1	69.520	59.283
	TS2	51.183	22.248
8	TS1	68.290	25.861
	TS2	66.250	26.225
9	TS1	95.890	63.586
	TS2	85.291	37.667
10	TS1	91.060	30.040
	TS2	75.333	22.458
11	TS1	140.250	77.310
	TS2	112.441	92.815

12	TS1	119.690	43.895
	TS2	110.375	69.990
13	TS1	82.970	30.457
	TS2	90.991	54.212
14	TS1	102.370	40.829
	TS2	76.191	30.966
15	TS1	142.050	63.456
	TS2	95.391	30.966
16	TS1	111.360	47.328
	TS2	137.458	63.195
17	TS1	139.730	62.005
	TS2	168.475	75.421
18	TS1	123.050	41.073
	TS2	224.950	156.668

Note: Range: 0-250 words

Appendix I

Means and Standard Deviations for Reading Efficacy and Reading Challenge

Factor			Reading Efficacy (M/SD)	Reading Challenge (M/SD)
Between Subjects				
Group			5.818/1.108	5.476/1.360
Gender				
	Males		5.788/0.978	5.788/1.289
	Females		5.861/1.132	5.077/0.953
Services				
	No Services		5.687/0.903	5.362/1.360
	Special Education		5.791/1.249	5.100/1.288
	Second Language		5.968/1.064	5.425/0.958
Within Subjects				
Time				
	Pre		2.670/0.665	2.350/0.805
	Post		3.147/0.515	2.963/0.612
Gender by Time				
	Pre			
		Males	2.673/0.580	2.461/0.809
		Females	2.666/0.810	2.188/0.819
	Post			
		Males	3.115/0.573	3.015/0.665
		Females	3.194/0.445	3.300/0.707
Services by Time				
	Pre/No Services		2.656/0.516	2.462/0.853
	Post/No Services		3.031/0.558	2.900/0.778
	Pre/Special Education		2.583/0.875	2.266/0.864
	Post/Special Education		3.208/0.485	2.800/0.565
	Pre/Second Language		2.750/0.707	2.000/1.131
	Post/Second Language		3.218/0.541	3.125/0.533

Note: Range: 0-4. No 3-way means were reported as they were not meaningful due to small cell size.

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