



CARREADER

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Connecticut Association for Reading Research**

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CARR Events, Grants & Scholarships

Events

SRBI Lecture Series Sponsored by CRA and local councils across the state.

Saturday, November 7, 2009

Speaker: Dick Allington

Topic: Practices to Support SRBI

Thursday, March 25, 2010

Speaker: Julio Coiro

Topic: New Literacies

Saturday, May 31, 2010

Breakfast Meeting

Scholarship winners presentations

CARR Research and Scholarship Grants

CARR encourages research in reading, writing, and the language arts through two types of scholarships:

1. CARR members may apply for a *Best Practice in Teaching Literacy mini-grant* of \$500.00 of action research in the classroom.
2. Graduate students in a program leading to a reading/language arts consultant certification or certification as a remedial language arts teacher or a doctorate in curriculum and instruction may apply for the \$750.00 **Wirth-Santoro Research Scholarship**.

We ask the research and scholarship grants submit an article of their research to be published in the *CARRreader*. For further particulars on either of these grants, please contact Rena Shove at renashove@hotmail.com



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CARR Goals

Professional Development

To enhance and improve the professional development of reading and language arts educators in Connecticut

Advocacy

To provide leadership in support of research, policy, and practice that improves reading instruction and supports the best interests of all learners and reading professionals

Partnerships

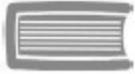
To form partnerships with other organizations including universities and local agencies that share our goal of promoting literacy

Research

To encourage and support research at all levels of reading and language arts education to promote informed decision making by reading professionals, policymakers, and the public

Global Literacy Development

To identify and support leadership and significant state, national, and international issues



About the Publication

Managing Editor

Judith Stone Moeller

Editorial Board

Julie Birch

Margaret Queenan

Judith Stone Moeller

Ann Marie Mulready

***CARReader* Call for Manuscripts**

We invite all those interested in literacy research to submit articles for publication. We request scholarly articles, grounded in theory and research that are of interest to both researchers and teachers. We invite a wide range of submissions focusing on critical issues, current research and/or instructional strategies as they relate to literacy issues on the national level and the state of Connecticut.

- reviews of the literature
- graduate /field studies
- thesis statement
- action research
- position statements

The *CARReader* is a juried publication that is published once a year in the fall. Its contents do not necessarily reflect or imply advocacy or endorsement by CARR, its officers, or members. Inquiries and submissions should be directed to the *CARReader*, Judith Moeller, ACES Reading and Language Arts Educational Specialist, Peter C. Young Bldg, 350 State Street, North Haven, CT 06743 or sending an email to JMoeller@aces.org.

Guidelines for Publication

Publications are limited to 2800 words or fewer and must include a title, author, statement of purpose, review of the literature, methodology, summary of findings, discussion and/or recommendations, conclusions, and references. Manuscripts should be typed double-spaced with ample margins for reviewer comments. All manuscripts should be formatted using APA 6th edition. The author needs to submit both a hard copy manuscript and a diskette copy (or e-mail version) compatible with Microsoft Word 2000. To be considered for the Fall 2010 volume, the manuscript must be submitted for review before May 1, 2011.

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Editor's Note
Judith Stone Moeller

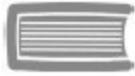
Every teacher has a story to tell! We are all consumers of literacy action research as we use research to inform our daily instruction. We also have a professional responsibility to keep informed as to the current best practices in teaching literacy.

Teaching Literacy to students within the 21st Century requires teachers to work more collaboratively than ever before. Working within a professional learning community allows us to link our inquiry studies together in order to provide a more rigorous literacy education to our students within a classroom setting. Collaborative forms of action research (also called teacher research) follows an inquiry model and is compatible to socio-cultural theories of learning discussed by Vygotsky . When teachers conduct research, they step back and examine their teaching and students through a different lens. This lens then allows teachers conducting action research to reflect upon best practices that enable their students to grow in their literacy develop and move forward with their learning.

The articles provided within this issue of the CARReader will entice you to want to learn more about their research on RtI and SIOP model for integrating social studies with English Language Learners. I want to thank Betsy and Diane Sisson for their Review of the Literature on the current research of RtI. Schools are entrenched in the Response to Intervention (SRBI) model in order to attend to our at-risk students more effectively. The authors provide a thorough overview of the current research. We look forward to their further research on this topic. Susan Lynch, Mildred Martinez, and Betty Murratti provide us with an engaging study conducted within an Intermediate Social Studies classroom using a Sheltered Instruction Observation Protocol (SIOP). With the new Connecticut Social Studies standards current being rolled out within our schools and the increasing number of English Language Learners within our classrooms, this protocol provides teachers with another tool to use when working with English Language Learners as they teach Literacy strategies across the content areas.

It is our hope that you will not only enjoy reading the studies as much as we have, but also be encouraged to engage in your own action research that you can share with other CARR members!

Judith Stone Moeller



What a joy to be president of the Connecticut Association for Reading Research. We are all consumers of research as we read IRA journals: *The Reading Teacher*, *Journal of Adolescent and Adult Literacy*, and *Reading Research Quarterly*; CARR's journal, *CARReader*; and other journals that investigate the ways we can assess students informally (sometimes without their even knowing) to discover how to help them excel. I'd like to propose that we become producers of research, as well, as we identify a problem, investigate it, and share our findings with colleagues as part of an action research initiative that brings us to our students' side.

When a reading specialist, classroom teacher, or administrator researches, we find a problem—or, more accurately, a problem finds us—that bothers us so much that we read all we can about it and conduct a hands-on investigation to learn about it. We interview students or colleagues to discover their perceptions of the problem and study artifacts, usually students' work and our own, to help us analyze the problem. For example, every Monday I am privileged to teach in the classrooms of five colleagues who are fourth grade teachers in a priority school district. I model the reading comprehension strategies that the National Reading Panel recommended. While some of the students learn the strategies, some students do not. More worrisome, while some of the students learn the science content, some do not. Obviously, a problem has found me; so I will conduct action research to investigate it.

Next year when I return to the same classrooms, I will apply the ideas I have read in research articles. For example, Lauren Aimonette Liang and Janice A. Dole in their May 2006 *Reading Teacher* article, "Help with teaching reading comprehension: Comprehension instructional frameworks," described five frameworks, two for teaching comprehension strategies, two for teaching content, and one for teaching both, "Concept-Oriented Reading Instruction (CORI)," described at www.cori.umd.edu/index.php. In CORI students concentrate on a topic for several weeks and learn content and strategies as they read many different texts.

Since I tried to implement CORI over the past few years and haven't been successful in producing an entire classroom of readers who learned both content and reading strategies, next year I will interview students and teachers while I examine my lesson plans, anchor charts, and students think sheets and writing to find out which of the components of the program are working—and which are not—and why:

- The direct experience part of the program? (What hands-on science projects engage fourth grade students—and how do I find them?)
- The gathering information part of the program? (What trade books exist on the topics at students' reading levels—and where can I find the money to buy them? What Internet texts on fourth grade topics exist at students' reading levels? What experts can join us?)
- The comprehension part of the program? (What comprehension strategies are effective for which science topics? Or are all of them pertinent for all topics? Is one sequence for learning and applying the strategies better than another? Do some children already know the strategies and when to apply them and if so, what then?)
- The presenting-information-to-peers part of the program? (Which publishing opportunities are exciting for fourth grade students—their teacher's web page? school hallways? letters to next year's fourth graders? class magazines? other venues? Would parents sponsor a school magazine?), and
- Where do whole class and small group discussion fit in? Or do they?

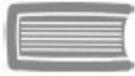
I can't wait to ask my new questions of next year's students and of my colleagues and their ELL and special education partners. I know that I will enjoy interviewing students and having lunch with teachers because that's the part I've enjoyed most in the past. I also know I'll learn most from examining students'

President's Message

work and bringing questions to them so they can help me find answers: *What comprehension strategy did you use as you were reading about the rain forest? Why that one? What did you learn? Where did your comprehension break down? What did you do? What do you do when a text is too hard for you?* I also know I will find themes to share with colleagues when I comb through the data. For example, one year I discovered that the same comprehension strategies, like visualizing, question generation, synthesizing, inferring, and making connections, that mark powerful readers can make writing audience friendly.

Action research is to professional learning as hands-on experience is to student learning—indispensable. I hope you will join me in letting a problem find you and in conducting action research to investigate it. I hope you will join me, too, in appreciation for Betsy Sisson and Diana Sisson's scholarship in reviewing the literature on Response to Intervention (RtI) and Susan Lynch, et. al.'s research on SIOP published in this CARReader and in anticipation of another researcher's presentation at the Hawthorne Inn in Berlin on October 8 at 4:30: Janice Almasi, IRA Board Member and author of books and articles on comprehension strategies, early literacy, and classroom discussion and who was lucky enough to research with Michael Pressley. It will be wonderful to hear her ideas about the importance of and ways to make classroom discussion more powerful. It will be wonderful to hear your ideas, too. You can write to me at mqueenan@bridgeport.edu.

Margaret



Response to Intervention: A Review of the Literature

Diana Sisson and Betsy Sisson

Connecticut Association for Reading Research

Abstract

Federal legislators enacted the Individuals with Disabilities Education Act in 2004 and introduced a new method of academic intervention known as Response to Intervention (RtI) which marked a turning point in special education policy, shifting the focus from accessibility to accountability. Commonly viewed as a reaction to excessive misdiagnoses of students with learning disabilities, RtI represents the culmination of decades of research and advocacy. Connecticut has devised its own model referred to as scientific research-based interventions, or SRBI. Recognizing that this policy is grounded in the work of special education but with broad ramifications on the teaching and learning of *all* students, the Connecticut Association for Reading Research will be conducting a study on the SRBI model in Connecticut.

Response to Intervention: A Review of the Literature

Emerging from the Individuals with Disabilities Education Act of 2004, Response to Intervention (RtI) represents a national paradigm shift in how schools identify children with handicapping conditions, restructuring the delivery of classroom instruction, assessment, and intervention support services to align with research and scientifically-supported practices. Students with learning disabilities (LD) comprise the greatest proportion of handicapped students, but with approximately 80% of students classified as LD also being described as reading disabled (Lyon, 1995), RtI has broad implications not just for the field of special education but also for general education and reading professionals.

Historical Influences

Although RtI represents a federal policy that ostensibly originated in 2004, its roots in American education go much deeper. From as early as the late nineteenth century, psychologists and researchers (e.g., Huey 1908/1968; Orton, 1925) began to study the cognitive processes of reading using scientific experimentation (Berninger, 2006; Reed & Myer, 2007; Smith, 2002), and by the middle of the twentieth century, behavioral psychologists were focusing their research on data analysis and its applications for problem solving in social contexts. Eventually their scope expanded to include monitoring and collecting data on school-based interventions and the impact the instructional setting has on student outcomes (Wright, 2007).

Within this time of developing an understanding of academic achievement and the role interventions play in that process, concerned parents of students who exhibited persistent learning difficulties attended a conference in 1963. Believing that their children were failing to receive appropriate educational services, they approached the keynote speaker, Samuel Kirk, a pioneer in special education. Explaining their desire to form a national organization to advocate for the rights of their children, they sought his advice for a name that would define their cause. Although Kirk did not favor labels, he suggested the designation of “learning disabilities.” Under this umbrella term, these parents united with formidable political influence and set out to achieve legislation that would ensure free and appropriate education (FAPE) for all handicapped children (Berninger, 2006; Hallahan & Mercer, 2001; Kirk, 1976).



RtI in the Context of Federal Policy

The first federal legislation addressing the needs of special education students came with the passage in 1975 of the Education for All Handicapped Children Act (Public Law 94-142), later re-codified as the Individuals with Disabilities Education Act (IDEA), which required public schools to provide equal access to education for children with physical and mental disabilities. Nonetheless, it created problematic situations by failing to delineate specific qualification criteria. Most states complied with the law by adopting the IQ-achievement discrepancy model which identified learning disabled students based on a significant incongruity between IQ and achievement test scores (Fuchs, Mock, Morgan, & Young, 2003).

The Individuals with Disabilities Act of 1977 preserved the traditional definition of a learning disability as “a severe discrepancy between achievement and intellectual ability” (U.S. Department of Education, 1977, p. G1082), effectively institutionalizing the discrepancy model. This criterion would shape identification approaches for the next 30 years.

Despite the work of the federal government to improve services to all students, the landmark report, *A Nation at Risk: The Imperative for Educational Reform* (The National Commission on Excellence in Education, 1983), condemned American schools for not providing quality education and suggested that the country hovered on the precipice of failure. This indictment set in motion the accountability movement that has pervaded national discourse and legislative policy for decades.

Through numerous reauthorizations and amendments (i.e., 1983, 1986, 1990), federal policymakers retained their emphasis on access to education for disabled students (Hardman, 2006). Meanwhile, concern was growing. Over the course of the two decades of this historic legislation, students classified as learning disabled increased by a startling 200% (Vaughn, Linan-Thompson, & Hickman, 2003) with 12% to 14% of American students currently receiving some form of special education services (Hall, 2008).

Of these students, 52% to 70% who were identified at the school level fail to meet state and federal eligibility (Gresham, 2001).

The 1997 amendments to IDEA legislation marked a turning point in special education policy, moving from a focus on accessibility to education to accountability for results (Hardman, 2006; U.S. Department of Education, 2009). Fueled by this perceived lack of accountability to meet the needs of *all* students, Congress passed the No Child Left Behind (NCLB) Act in 2001, surpassing the tenets of IDEA and usurping state and local autonomy. This legislation demanded the same learning outcomes for all students – regardless of disability.

Building on NCLB’s focus on accountability and scientifically-based decision making (Fuchs & Fuchs, 2006; Kavale, Kauffman, Bachmeier, & LeFever, 2008), the Individuals with Disabilities Education Act of 2004 responded to concerns over misdiagnosis of students with learning disabilities and encouraged states to discard the discrepancy model. The legislation also instituted four main recommendations. First, IQ testing should not be used as the sole criterion for classification. Second, classroom instructional practices should be research based. Third, appropriate instruction relevant to the needs of students must be documented. Fourth, fifteen percent of IDEA funds could be allocated to provide services to students before they are identified with a disability (Hall, 2008; Holdnack & Weiss, 2006; Wright, 2007). Regulations followed in 2006 that strengthened the 2004 position by permitting states to disallow the discrepancy model but requiring them to implement scientifically-based research interventions.

In reflecting on this issue of identifying students with learning disabilities, Frank Gresham (1991), a noted psychologist working in the field of special education, had referred to students who did not respond positively to supports as “resistant to intervention.” During the 2001 LD Summit, he suggested the “children who fail to respond to empirically validated treatments implemented with integrity might be identified as LD” (Gresham, 2002, p. 499). By 2004, the term

“resistant to intervention” was altered to the more positive “response to intervention,” and a new policy found its name.

Putting the Framework in Place

The National Association of State Directors of Special Education (NASDSE) defines Response to Intervention as “a practice of providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals and applying child response data to important educational decisions (NASDSE, 2006, p. 3). Although legislated by the federal government and defined by the field of special education, two identifiable groups advocated for its implementation – behaviorally-oriented school psychologists and early reading researchers (Fuchs, Mock, Morgan, & Young, 2003).

Agreeing on the need to revise current policies and to eliminate the IQ-discrepancy model, behaviorally-oriented school psychologists and early reading researchers differ on how RtI should be implemented. Early reading researchers espouse the notion of following a standard treatment protocol. Although implemented in various forms, one common format is providing group interventions which are based on common student referral concerns and operate outside of the classroom, such as those found in school-based tutoring programs. For example, schools offering interventions that provide the same generic remediation for all referred students exemplify this protocol. While the standard treatment protocol is efficient and can service large numbers of students, it is difficult to customize the group interventions specific to the needs of individual students (Wright, 2007). In contrast, the psychology field promotes the problem-solving model which is based on the scientific model of inquiry and operates within the classroom to offer targeted interventions for individual students. For instance, classroom teachers provide individualized support based on

their direct knowledge of each student’s unique needs. This model offers a more individualized approach but requires much more planning, preparation, and resources (Fuchs, Mock, Morgan, & Young, 2003; Hale, Kaufman, Naglieri, Kavale, 2006; Wright, 2007). At this juncture, the problem-solving model is the most commonly used approach.

Features of RtI

As an evolving model, there are differing views of the central features of RtI, however, a common thread runs throughout the literature. Predominantly implemented in a sequential, linear pattern, RtI includes the following recognized components.

- Multiple tiers of research-supported interventions: This is one of the principle components of RtI and is based on the public health model of increasingly more intensive interventions for those not responding to general methods. Although there is no set number of tiers, RtI commonly contains three levels of intervention (Davis, Lindo, & Compton, 2007; Fuchs & Fuchs, 2008; Sugai & Homer, 2006). Tier I typically involves universal screenings for all students and progress monitoring for classroom-based interventions. Students move to Tier II if they are not successful in Tier I and begin to receive supplementary instruction in small groups with frequent progress monitoring. Tier III is characterized by more intensive and more regular interventions with additional progress monitoring in small groups or individually for those students who did not respond in previous tiers. Although students may be referred for special education evaluation at any juncture of this model, they are generally referred if Tier III is unsuccessful for their needs (Bradley, Danielson, & Doolittle, 2005; Burns, 2008).



- Universal screenings: The first step in prevention, universal screenings, identifies students who are at risk in general education (Tier I). Screenings typically occur three times a year, focus on targeted skills, and should be predictive of later reading outcomes. Student performance results are compared to benchmark expectations, and students who fail to meet those benchmarks may receive additional intervention support in Tier II (Fuchs & Fuchs, 2006; Jenkins, Hudson, & Johnson, 2007; Mellard & Johnson, 2008; Mesmer & Mesmer, 2008).
- Progress monitoring: A critical aspect of accountability, progress monitoring involves evaluating student performance toward a targeted goal. The frequency of the monitoring process fluctuates based on student needs, and it forms part of the data analysis to determine whether students should move to another tier of intervention (Cummings, Atkins, Allison, & Cole, 2008; Wedl, 2005). For example, a student in Tier II might be assessed on a weekly basis to determine if appropriate progress is being made. If the student is responding to the intervention, then progress monitoring would indicate continued support in Tier II, or perhaps, if substantial progress is demonstrated, a move back to Tier I. On the other hand, if the student's assessments do not illustrate the student is responsive, then progress monitoring would suggest a possible move to Tier III for more frequent interventions at a greater intensity of support.
- Data-based decision making: This permits progress monitoring to be documented and analyzed. The data is then used to make informed decisions regarding moving students among the tiers, altering frequency and intensity of interventions, and determining when students meet exit criteria (Hall, 2008; Wedl, 2005; Zirkel & Krohn, 2008).
- Staff development: Building staff capacity is a crucial component to the effectiveness of

an RtI model. It should encompass an explanation of the rationale for RtI as well as provide ongoing support and guidance for implementation practices (Barnes & Harlacher, 2008; Danielson, Doolittle, & Bradley, 2007; Hall, 2008; McEneaney, Lose, & Schwartz, 2006).

The International Reading Association Weighs In

Having recently formed the IRA Commission on RtI, the International Reading Association released a working draft, suggesting that RtI is a “comprehensive, systemic approach to teaching and learning designed to address language and literacy problems for *all* students through increasingly differentiated and intensified language and literacy assessment and instruction (“IRA Commission on RtI,” 2009, p. 4). The draft also recommends that reading professionals be active participants in the process and offers six interrelated principles to assist its members in implementing this framework: 1) instruction that optimizes learning, 2) responsive teaching and differentiation, 3) assessment that informs instruction, 4) collaboration, 5) systemic and comprehensive instruction and assessment for all K-12 students, and 6) expertise from teachers and other professionals prepared to teach language and literacy.

Connecticut Transforms RtI into SRBI

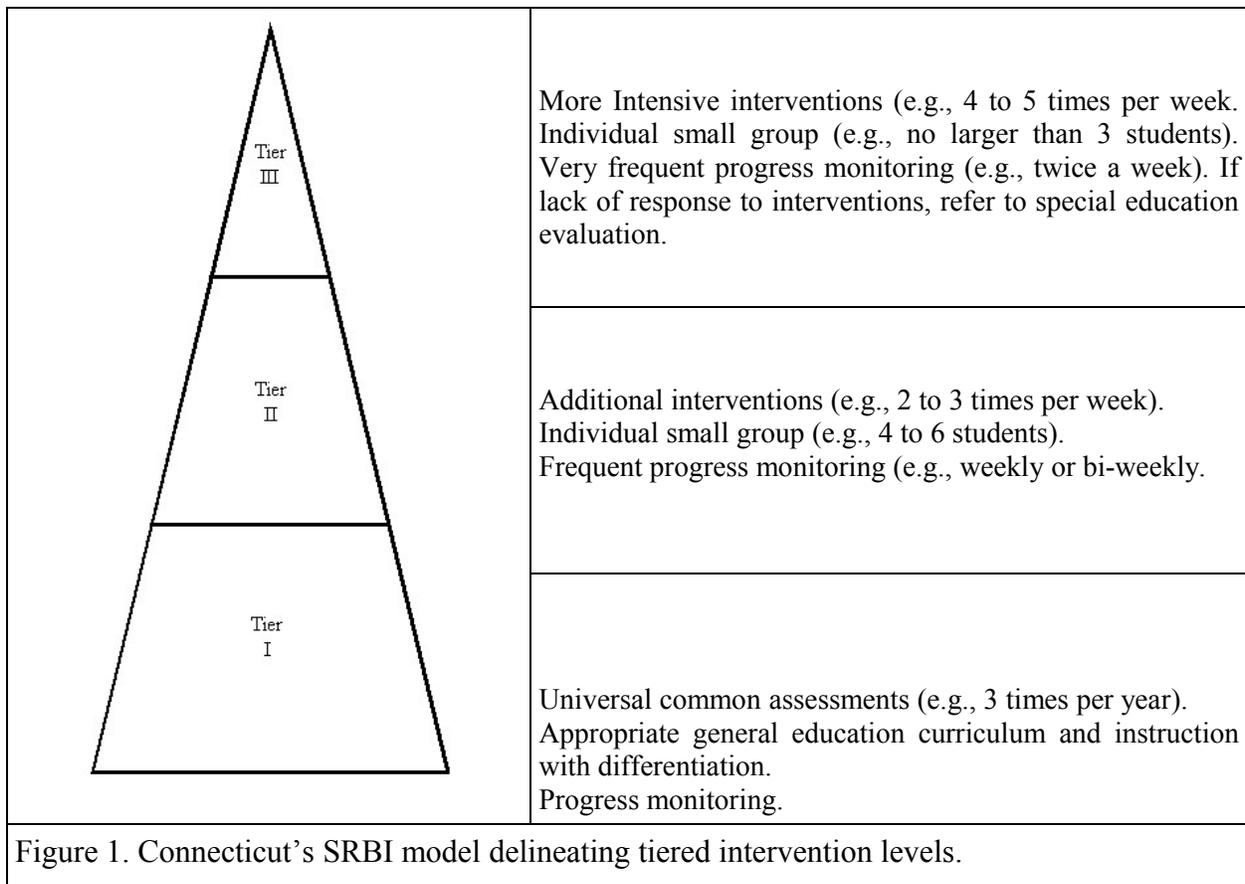
A recent survey found that approximately 86% of states are currently developing or implementing RtI in some form to address the needs of their students (Hoover, Baca, Wexler-Love, Saenz, 2008). Connecticut is no exception. Previous state testing results had indicated significant areas of concern: students who entered kindergarten lacked expected literacy skills, reading scores on the *Connecticut Mastery Test (CMT)*, the *Connecticut Academic Performance Test (CAPT)*, and the *National Assessment of Educational Progress (NAEP)* were flat, and

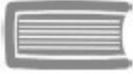
English language learners and students with disabilities continued to perform at low levels (Costello, 2008).

In an effort to improve education for all students as well as specifically to attend to the needs of under-performing students, Connecticut formed an RtI advisory panel in 2006 who developed a model referred to as “scientific research-based interventions (SRBI) to emphasize the central role of general education in the intervention process and the importance of educational practices that are scientific and research-based” (Connecticut State Department of Education, 2008, p. 2). The term was selected because “RtI models are dependent on interventions in which *evidence* is available to attest to their effectiveness” (Costello, 2008, p. 4), and Connecticut’s SRBI model is not forced to

operate within such parameters.

In 2007, Connecticut awarded Bristol, Greenwich, and Waterbury three-year grants to develop best practice sites for the SRBI model. Designed to partner with other school districts as they began the implementation process, these school districts agreed to undertake SRBI prior to the state’s full-scale implementation plan. Meanwhile, the state continued to work on their vision of RtI and in 2008 released their executive summary of SRBI (Connecticut State Department of Education, 2008). Similar to other models, the three tiers of intervention create a comprehensive system of structured supports with increasing intensity and individualized services with special education evaluations occurring commonly in Tier III but theoretically at any tier (see Figure 1).





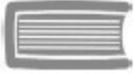
Next Steps: CARR Investigates

Recognizing the significant restructuring of schooling undertaken by Connecticut's SRBI model, the Connecticut Association for Reading Research (CARR) is conducting a three-year research study into its implementation process. Over the course of the coming months, researchers will be meeting with focus groups, conducting interviews, and analyzing participant surveys in an effort to describe the performance of the SRBI model within schools and districts across the state. These data should yield a comprehensive report on the status of reform and its implications on teaching and learning in Connecticut.

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The Application of Sheltered Instruction Observation Protocol (SIOP) in an Intermediate, Heterogeneous Social Studies Classroom

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Abstract

This study examined the use of Sheltered Instructional Observational Protocol (SIOP) in a 6th grade heterogeneous social studies classroom in an urban district. SIOP is a teaching framework designed to be used to teach English language learners (ELLs) content (science, social studies) and content area literacy. This study looks at the effectiveness of SIOP in a non-ELL content class. In this study, 15 students were given a baseline test after learning one section of social studies content in a traditional classroom (teacher lectures, students read text and answer questions). The teacher then taught two more sections, this time incorporating SIOP teaching components. Students were tested on the new material, and results were compared to the baseline assessment. At the end of the five week study, scores revealed that 73% of students made gains across three assessments. SIOP teaching methods rendered positive results in achievement in this study, revealing SIOP as an effective lesson planning and implementation tool for teachers of non-ELL students.

Introduction

Nationwide standardized tests currently include reading, writing, math and science; however, the No Child Left Behind Act (NCLB) does not mandate the assessment of social studies

(Bailey, Hollifield & Shaw, 2006). Kaplan (2002) views a pattern of limited time and teaching strategies devoted to social studies instruction as evidence of the devaluation of social studies in the classroom, at least partly due to the absence of social studies on standardized tests (Bailey, Hollifield & Shaw, 2006). Bailey, Hollifield and Shaw (2006) conducted studies which revealed that teachers often resorted to read the book, answer questions, and define vocabulary words activities. Such instructional limits in social studies classrooms resulted in concerns regarding students' deficits of knowledge in this content area; without sufficient background knowledge, students would have difficulty succeeding in the secondary grades, and eventually might not pass graduation exams mandated in some states (Bailey, Hollifield & Shaw, 2006).

Concerns regarding social studies literacy extend to all content area instruction; students need to strengthen literacy skills not only in their language arts classes, but also in social studies, science and math classes as well. In her article, "Supporting Adolescent Literacy Across the Content Areas," Julie Meltzer (2001) observes the current standards movement in education, which asserts that societal literacy needs dictate that all students must acquire skills to construct meaning from text and remember and apply knowledge learned from text. For these reasons, Meltzer continues, students require *content literacy*, the ability to effectively read and understand



academic content in order to communicate and participate in various communities.

The Texas Education Agency (2002) report echoes this sentiment, stating that teachers from every discipline, on every grade level, have the opportunity to teach reading strategies specific to their content areas to ensure that students can learn from texts across the curriculum. Meltzer (2001) references research demonstrating that student performance, especially at the secondary level, improves when teachers combine content and literacy instruction. Recent studies also suggest that, to successfully address students' reading comprehension difficulties, teachers must consider the use of a cohesive strategic framework that can produce students who can more deeply understand what they read (Meltzer, 2001).

Educators of English language learners (ELLs) developed such a teaching framework, Sheltered Instruction Observation Protocol (SIOP), in order to adapt content curriculum for instruction in foreign language content area classes. While educators traditionally use SIOP to meet the literacy needs of ELL students, the SIOP framework possesses the qualities of a strong, cohesive content literacy program and has been used in classrooms composed of combined ELL and non-ELL students (Echevarria & Short, 2002). However, there currently exists little, if any, research supporting the use of SIOP in classes composed exclusively of non-ELL students.

Literature Review

Echevarria and Short (1999) developed and studied the use of SIOP, a protocol made up of thirty instructional components, grouped into three sections: preparation, instruction and review/evaluation. SIOP techniques include carefully scaffolded instruction, visuals and demonstrations, targeted vocabulary development, multiple modalities, connections to student experiences, student interaction and discourse, adaptation of materials and supplementary materials (Echevarria & Short, 2002). Due to the absence of research supporting

SIOP as an effective framework in the non-ELL classroom, our review of research literature focuses on some major research-based components of SIOP.

The SIOP framework reflects constructivist theories introduced by Vygotsky (Lange, 2002). According to constructivism, "reading to learn is a *two-way transaction* between the reader and a text" where readers actively and strategically build (or *construct*) meaning by combining what they already know (their *schema*) with new information in the text (Kallus & Swafford, 2002, Analysis section, ¶ 6). Activating and building students' background on the subject so they can make connections is a critical to SIOP (Brown University, "Teaching Diverse Learners"). Following studies of the relationships between schema, text comprehension and text engagement, Alexander and Jetton (2000) observe, "Of all the factors, none exerts more influence on what students understand and remember than the knowledge they possess" (as cited in DelliCarpini, 2007, Section 3, ¶ 1). Donley's and Spires' literacy studies on the activation of prior knowledge reveal "when students make elaborations to connect their prior knowledge with text information, higher level comprehension is enhanced" (Spires & Donley, 1998, p. 257).

"Teaching Diverse Learners" of the Brown University Education Alliance describes SIOP as a framework that relies on *scaffolding*. Like constructivist theories, instructional scaffolding is rooted in the concept of schema (Byers, 2001) in that teachers offer support based on the amount of prior knowledge students possess on the content topic and help them build on their pre-existing knowledge (as cited by Lange, 2002). Lange (2002) defines instructional scaffolding as levels of support provided by teachers for their students where initially, during the introduction of a concept, students receive higher levels of support primarily through teacher modeling. Teachers continue to offer various levels of support, dependent upon the students' needs, as they move toward deeper understandings and eventual independence (Lange, 2002).

Student interaction is another key SIOP component. Vygotsky (1978) asserted that ideas of learning rely on social interaction (Lange, 2002), viewing students' meaningful dialogue as "a necessary condition" to learning new information (Beck & Kucan, 2003, Section 5, ¶ 3). Davis, Guthrie and Lutz (2006) view student dialogue as critical to understanding text, describing social classroom contexts as a community of readers who exchange their interpretations in an effort to construct meaning. Kallus and Swafford (2002) equate content literacy with "the ability to use language to learn with texts" and contend that educators must incorporate "talking to or listening to learn" into their lesson plans. Numerous studies demonstrate that the inclusion of discussion in the classroom is critical to the comprehension of text (Wolf, Crosson & Resnick, 2005).

The SIOP framework also incorporates the instruction of multiple literacies (Brown University, "Teaching Diverse Learners"). Effective instruction involves both linguistic text (print) and nonlinguistic text (video, DVD, television, audio text, photographs, and movement) (Kallus & Swafford, 2002, Considerations section, ¶ 7). Classroom teachers often present visual aids, for example, to supplement print, as "visuals provide a wealth of information that both reinforces and supplements text content" and are usually found in expository, content area texts (Rakes, Rakes & Smith, 1995, Section 1, ¶ 1).

Methodology

Participants

This study focused on Elisabeth Murratti's sixth grade mainstream classroom in an urban middle school. The class included students with mixed abilities – six females and nine males ranging in ages of 10 to 11 – but did not include English language learners (ELL) or special education students. Students came from diverse cultural and racial backgrounds: 80% Hispanic, 13% African American, and 7% White. Ms.

Murratti conducted this study with her class. She had several hours of prior training in using the SIOP framework and four years of experience teaching Language Arts to middle school students in an urban public school setting. This was her first year teaching social studies.

Instruments

Ms. Murratti designed all lesson plans using SIOP, dividing the lesson framework accordingly into three parts: preparation, instruction, and review/evaluation. The preparation components emphasized content and language objectives, the instructional sections focused on teaching strategies that accommodated students' learning differences and the evaluation phase emphasized assessment of students' comprehension in achieving the language and content objectives.

Instructional content was selected from a middle school level, social studies textbook, *Prentice Hall World Studies* (Jacobs, Levasseur, Kinsella, Feldman, & Heritage, 2006), from the unit "Foundations of Geography." First, Ms. Murratti taught one section, "Forces Shaping the Earth," following traditional methods of instruction: teacher lecture, reading the text book and writing answers to comprehension questions. Next, she taught two sections, "Climate and Weather" and "How Climate Affects Vegetation," using the SIOP framework as part of the treatment for this research.

A *baseline assessment* was administered initially, covering concepts students had studied using traditional instructional methods, in order to compare these results with results following lesson taught using SIOP. Following SIOP instruction, Ms. Murratti administered the *first assessment* on climate and weather and the *final assessment* on climate's affect on vegetation. Assessments included matching, multiple choice and short essay questions.

Students also wrote journal entries throughout the study, reflecting on their learning experiences.



Procedures

Participants received instruction for a period of five weeks, five periods per week during regular social studies periods. Ms. Murratti first developed a lesson plan using the SIOP checklist, which provides a comprehensive guide for lesson planning and helps the teacher accommodate differences in students' proficiency levels. Planning included selecting appropriate content and language objectives under the state standards for both language arts and social studies. She chose supplementary materials such as Power Points and pictures. She also planned activities that integrated language practice opportunities with the content, such as journal writing and summarizing key concepts.

Instruction began with teacher explanations of academic tasks, stated clearly and using multiple modalities (auditory and visual). Ms. Murratti explained language and content objectives, and what they would do to achieve each objective. She enunciated carefully and slowed her speech rate. Students were grouped within their various levels to ensure that the higher level students could assist the lower level students. To introduce the topic, Ms. Murratti activated students' prior knowledge, or *schema*, using an anticipation guide (worksheet of questions and statements related to the topic). Students discussed ideas in their groups, collaboratively reaching consensus for each statement. Ms. Murratti defined key vocabulary with the aid of pictures. She regularly employed a variety of *comprehensible input* strategies such as the viewing of Power Points of vegetation regions, including a nature walk in a densely wooded area, and visual aids provided in the text such as maps, charts, pictures, and graphic organizers. For homework, students created questions and summarized their notes, an important task that focused their attention on organizing and categorizing main ideas. Frequent group activities provided students practice at integrating different aspects of language skills (reading, writing, listening, and speaking). Throughout the unit, Ms. Murratti reiterated lesson objectives and

monitored students' engagement.

Finally, students reviewed key vocabulary and concepts of climate and vegetation as a whole class activity. Ms. Murratti monitored class discussions and asked comprehension questions to check students' understandings. Students took the final assessment the following day and reflected in their journals about their scores on the assessments and the new instructional approach.

Results

While there were no changes between assessments of students scoring in the A range, Figure 1 reveals significant changes within the ranges of grades falling between B and F. The most dramatic change was within the F range where five students improved their baseline grade from an F to a passing grade on the first assessment. Overall, 73% of the students increased test scores from the baseline assessment to the first assessment, with the greatest score increase of 39 points. The greatest point loss was 32.

Figure 2 reveals that while no student earned an A in either the baseline or the first assessment, two students earned A's on the final assessment. There was no change between students scoring D's or F's. However, there was a decrease in students whose scores were B's or C's. The two students whose scores were a B or C on the first assessment increased their grades to A's on the final assessment. The greatest gain made from the first to the final assessment was 34 points while the greatest loss was 30. 64% made gains from the first to the final assessment.

Table 1 and Figure 3 illustrate that over the course of the study, students' average scores increased steadily. At the baseline level, the average score was a 59.4 while on the first assessment, students' scores averaged 68, an increase of 8.6 points. At the baseline level, 40% of the students earned a passing grade of 60 or higher. At the conclusion of the study, 73% of students earned a passing grade of 60 or higher. The difference in points earned from the baseline to the final assessment was 11.6.

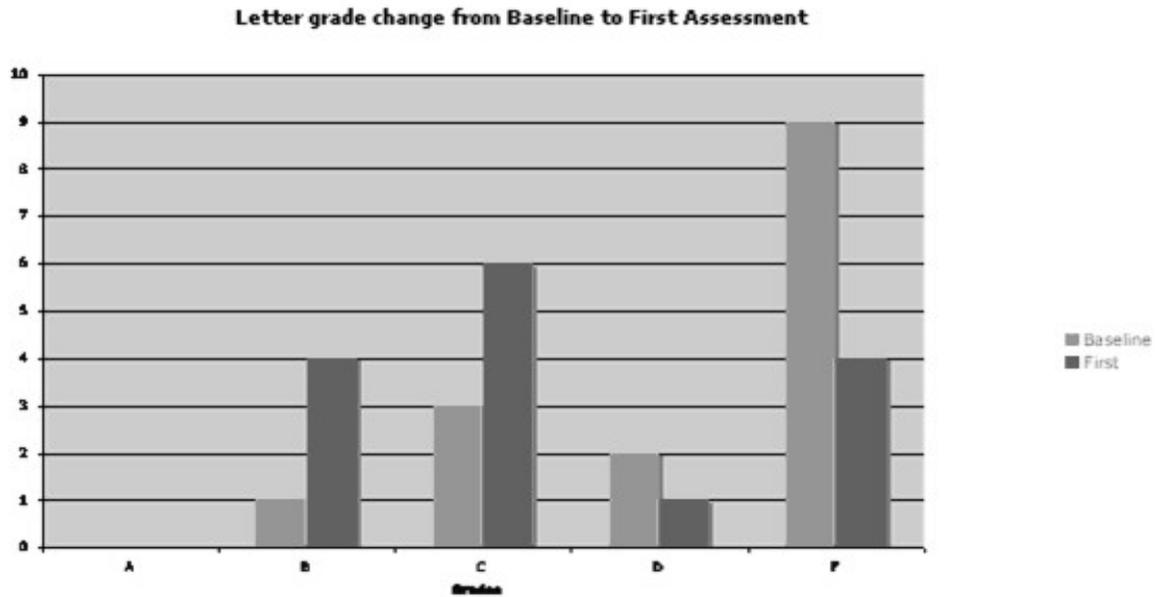


Figure 1. The initial effects of SIOP both positive and negative.

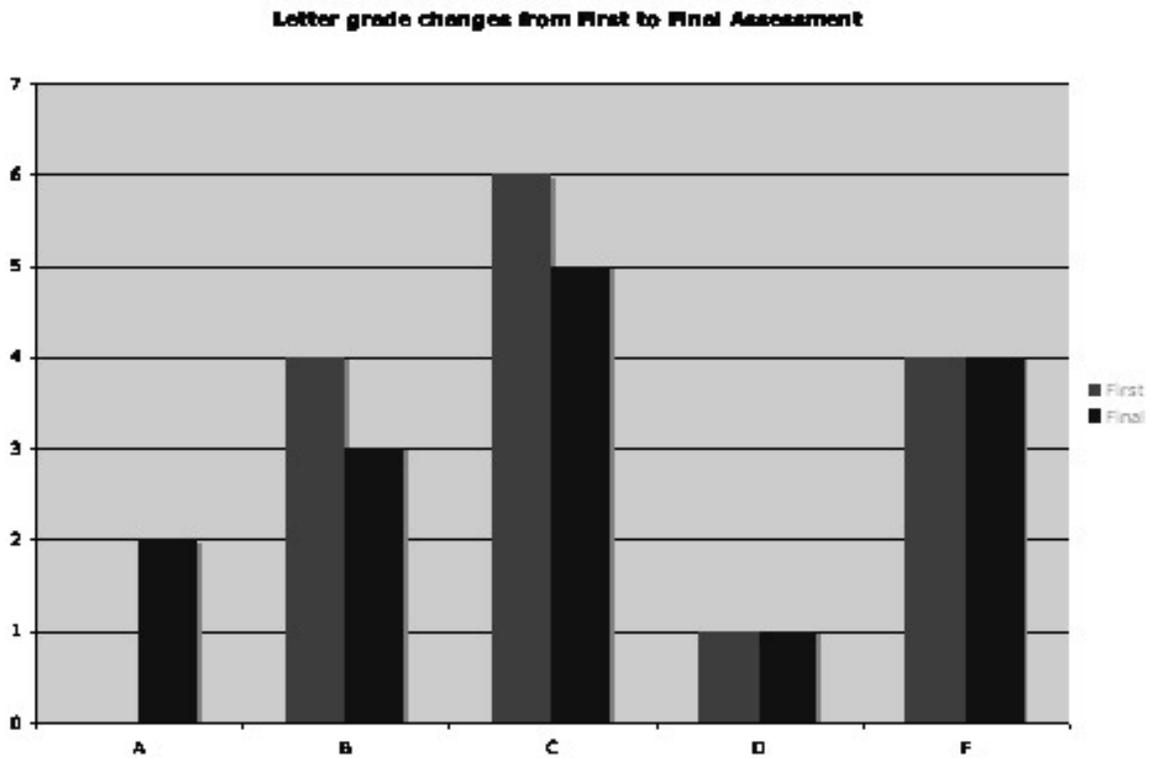


Figure 2. Secondary effects of SIOP both positive and negative.



TABLE 1: OVERALL EFFECTS OF SIOP OVER THREE ASSESSMENTS. Letter grade and point changes over the Baseline, First and Final Assessments

Student	Baseline	First	Point change	Final	Point change	Overall change
A	69	53	-16	56	3	-13
B	82	88	6	100	12	18
C	53	42	-11	41	-1	-12
D	58	71	13	81	10	23
E	51	74	23	81	7	30
F	64	78	14	78	0	14
G	73	41	-32	75	34	2
H	73	83	10	94	11	21
I	49	80	31	88	8	39
J	76	34	-42	63	29	-13
K	51	72	21	73	1	22
L	40	66	26	41	-25	1
M	56	79	23	75	-4	19
N	49	88	39	78	-10	29
O	47	71	24	41	-30	-6

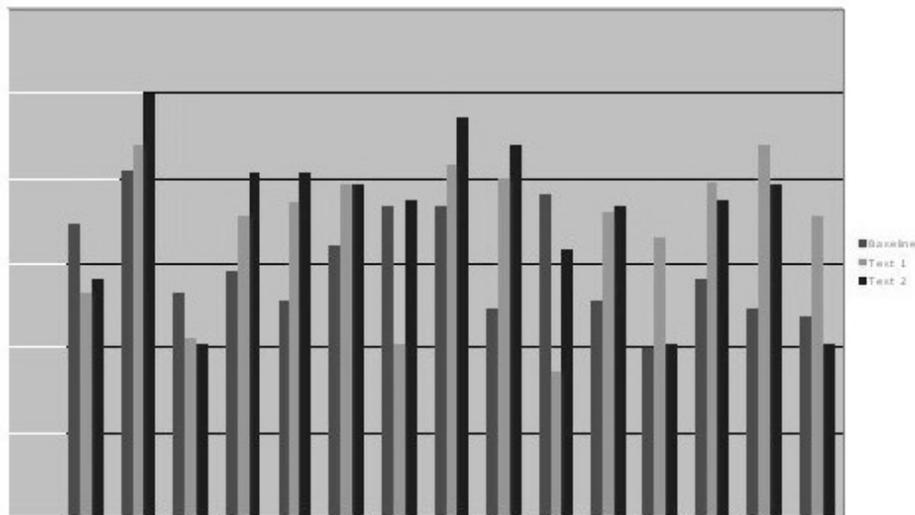


Figure 3. Overall effects of SIOP over three assessments

Thus, SIOP teaching methods rendered positive results in achievement in this study, revealing SIOP as an effective lesson planning and implementation tool for teachers of non-ELL students. Our findings suggest that the use of

SIOP helps sixth grade, non-ELL students better comprehend new social studies material. Our data reveals that most students demonstrated improvements over the five week study when comparing the final assessment following the

implementation of SIOP structured lessons to the baseline assessment following traditional instruction; 73% of students made gains across the three assessments. Of the 11 students who made overall achievement gains when comparing the baseline to the final assessment, all increased their scores by an average of 20 points. However, some scores showed a decline in the final assessment when compared to the baseline assessment. This could be attributed to a lack of participation and note-taking on the part of these students. One such student, for example, shared in a journal entry that he did not study for the final assessment. Our results support the positive findings of researchers who studied isolated components that make up the SIOP framework (scaffolded lessons, activating schema, collaborative student discussions...).

Limitations

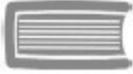
Several limitations may have impacted this study. For example, the planning and implementation of a SIOP lesson is time consuming given the multiple components that make up the framework, generally requiring longer than the five weeks, the duration of this study. Another potential limitation is the breadth of the SIOP framework itself. Given SIOP's incorporation of multiple teaching components, it is difficult to determine exactly which were particularly effective, or if it was, in fact, the combination of the research-based instructional components that led to students' academic gains. On the other hand, this was a study precisely on the effectiveness of the combination of the instructional components. Finally, the study involved only 15 students, a relatively small sampling.

Implications

Echevarria and Short (2002) proposed that sheltered instruction employs strategies that benefit both ELL and non-ELL students. Our study supports their proposition, demonstrating

that the use of the SIOP framework can be a successful approach to teaching content area reading and knowledge to non-ELL students. This could have significant implications in the area of literacy, particularly in light of current educational issues discussed at the Connecticut 2007 Reading Summit, where participants stated that "teachers at all grade levels should consider themselves literacy teachers, and be trained accordingly" (Levin Becker, 2007, ¶ 11). Suggestions from the panel to address these pressing issues included "integrating reading into all subjects" and "requiring that teachers be better prepared to teach reading" (Levin Becker, 2007, ¶ 7). Additionally, Summit participants observed that, based on nationwide and statewide standardized tests, "the gaps between black or Hispanic and white students" and "between poor and non-poor students" in Connecticut "are the widest in the nation" (Levin Becker, 2007, ¶ 2), as reported by the Connecticut Department of Education. Our SIOP study involved an urban demographic and demonstrated that the use of SIOP, infused with literacy instruction, resulted in content area academic gains in a poor, urban district of predominantly Hispanic students. The use of SIOP for teaching content area literacy, then, might help to close the current significant literacy achievement gaps between the poorer, urban school districts and the wealthier school districts.

SIOP addresses issues highlighted at the 2007 Reading Summit. SIOP combines the best researched-based literacy practices into a systematized structure, making it usable for teachers at any level in all subject areas for both ELL and non-ELL students. Our study demonstrates that SIOP could be used to effectively change, or enhance, the role of secondary, content area teachers by training them as teachers of content and literacy.



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