JOURNAL OF SCHOOL CONNECTIONS

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Length of manuscript. A manuscript should be 25-35 pages (including references, tables, and figures). All manuscripts must be page numbered and double-spaced in 12- point font with 1-inch margins all around.

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Journal of School Connections

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Editors' Introduction

Welcome to Volume 5 of *Journal of School Connections (JSC)!* We are delighted to share this publication with you! With the support of our Editorial Review Board and Guest Reviewers, we have selected four papers, focusing on varying dimensions of literacy education, that we hope you will find interesting and which will promote reflection on your own literacy instructional practices and beliefs.

The first paper, *Harmony and Disharmony: How Adolescents and Teachers View Motivation to Read,* by Delaney, Pitcher, Gillis, and Walker, compares and contrasts what adolescents report motivates them to read as compared to their teachers' views and practices. The second paper, *Year One of a Longitudinal Literacy Professional Development Initiative in an Urban School,* by Parsons, Parsons, Richey, Dodman, and Scales, explores the processes and consequences of a school-university partnership in a high-needs urban elementary school. The third paper, *Combining Print and Visual Information via E-Posters: Generating and Displaying Learning,* by Grisham, Lapp, Wolsey, and Vaca, describes the experiences of three groups of learners (11th grade history students, secondary teacher candidates, and literacy education graduate students) as they use Glogster, Prezil, VuVox, and VoiceThread to create e-posters. The final paper, *"I'm the Leader": Third-Graders' Meaning-Making and Social Interactions during Informational Text Reading,* by Maloch and Zapata, investigates ways in which three third grade students use digital and print-based informational texts, and interact with each other, while collaborating on an inquiry-based project. Taken together, we hope these papers stimulate meaningful thought and actions for future research and practice.

Journal of School Connections, Volume 5, also represents our entrance into a significantly larger electronic landscape. As of January, 2014, the *Journal of School Connections* has been indexed in the Education Source database within EbscoHost. According to EBSCOhost, "This massive file offers the world's largest and most complete collection of full-text education journals, and encompasses an international array of English-language periodicals, monographs, yearbooks and more. As the complete source of education scholarship, Education Source covers all levels of education—from early childhood to higher education—as well as all educational specialties, such as multilingual education, health education and testing. Content includes:

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- Full text for more than 550 books and monographs
- Full text for numerous education-related conference papers
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- And much more…"

With the advent of this greatly increased electronic exposure, we have also decided to eliminate the production of hard copies for future *JSC* volumes. Although we have fully enjoyed previously publishing in both electronic and paper formats, financial and environmental considerations have led to this decision. We sincerely hope that you continue to read and to enjoy *JSC* as it remains an open source publication.

DIANE H. TRACEY, Ed.D.
& SUSAN R. POLIRSTOK, Ed.D.,
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Harmony and Disharmony: How Adolescents and Teachers View Motivation to Read

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This article describes a study in which researchers compared what motivates adolescents to read, to the views and instructional practices of their teachers. Participating students completed the Adolescent Motivation to Read Survey-Revised (AMRS-R) which informed the research team about what motivates adolescents to read. Similarly, the teachers of these students answered questions on the Teacher Motivation Profile (TMP) and Conversational Interview to inform researchers of their teaching practices and what they view as motivating to their students. Results of the AMRS-R showed students' low value for reading and the instructional practices of their teachers, while results of the TMP revealed admirable attempts at motivational practices but restrictions based on mandates from school districts, time restraints, and lack of materials. Recommendations for teaching practices are provided and include ways to determine students' interests.

That adolescents have definite opinions about reading is well known but how teachers view and act on those opinions is not so well known. When given the opportunity to capitalize on their preferences, students tend to read more because they take pleasure in reading (Pachtman & Wilson, 2006). This is important because literacy, thinking, and

intrinsic motivation are closely intertwined (Verhoeven & Snow, 2001). Alvermann (2001) suggested that, "if academic literacy instruction is to be effective, it must address issues of self-efficacy and engagement" (p. 2). While some researchers have found that motivation to read declines in secondary school (Eccles, Lord, & Buchanan, 1996; Gottfried, Fleming, & Gottfried, 2001), others found little decline in motivation among age groups (Gottfried, 1990; Wigfield & Guthrie, 1997; Unrau & Shlackman, 2006). Lapp and Fisher (2009) and Casey (2009) found that book clubs and learning clubs, respectively, motivate struggling readers and writers based on their specific literacy needs. Practices such as cooperative learning (Shaaban, 2006), gender-specific book selections (Brozo & Schmelzer, 1997, cited in Young & Brozo, 2001), and offering choice in reading materials, (Guthrie & Davis, 2003; Author, 2007) have also been found to motivate adolescents to read. Reeves (2004) noted the importance of making connections between school-based texts and students' lives. Such findings imply that motivational differences may be related to instructional practices in reading (Guthrie & Wigfield, 2000).

The present study is grounded in the belief that teachers' instructional practices can motivate students to read. For these practices to be effective, teachers' beliefs about motivational practices should be congruent with students' views of motivational practices. Therefore, the research team sought to discover how teachers' self-reported instructional practices and beliefs about reading motivation are related to their students' perceptions of motivation.

Motivation to Read

Research suggests that when motivation is combined with social interaction and cognitive competence, it leads to engagement (Guthrie & Davis, 2003), which is further stimulated when students connect with a topic and develop an interest in it beyond the short term (Schussler, 2009). Sizer and Sizer (1999) further posited that students become intellectually engaged with instruction that is relevant, supportive, and promotes challenge. Wigfield and Guthrie (1997) added yet another dimension to motivation and engagement. They conceptualized it as "goals" for reading, as in learning a new skill. Experts have defined engaged readers as those who read frequently and enthusiastically for a variety of personal purposes (Guthrie & Anderson, 1999). Kamil et al. (2008) recognized that motivation and engagement are important "moderators for learning" but that there is limited research to tie motivation to literacy learning. Yet adolescents who regard reading as valuable and have positive self-concepts as readers are likely to spend more time on reading tasks than those who regard reading as less valuable and

have negative self-concepts (Shaaban, 2006). Peetsma, Hascher, van der Veen, and Roede (2005) found that self-concept is a powerful indicator of success in school while self-efficacy is a good predictor of achievement.

The National Council of Teachers of English (NCTE), in its policy brief on adolescent literacy, expressed concern that "The number of students who are not engaged with or motivated by school learning grows at every grade level, reaching epidemic proportions in high school" (2007, p. 4). Recent research on adolescent literacy supports the need to better understand factors involved in motivation as well as the crucial role that motivation plays in improving adolescent reading achievement. Berman and Biancarosa (2005) noted that only 30% of US 8th graders are proficient readers and suggested that decrease in motivation to read is the number one barrier to improving adolescent reading achievement. Other researchers agree with their assessment of the situation (Alvermann, 2003; Biancarosa & Snow, 2004) and it has also been found that engaged readers perform better on standardized tests than students who are less engaged (Gottfried, 1990). According to the 2009 National Assessment of Education Progress Report (NAEP), the percentage of 8th grade students performing at or above the Basic level increased, yet there were no significant gains in students performing at or above the Proficient level (NCES, 2009).

There has been limited research that compares secondary students' perceptions of motivation to the instruction they receive. Lau (2009), for one, examined the relationship between high school students' motivation to read, the amount of reading they engaged in, and their perceptions of reading instruction. A total of 1,146 students from 19 secondary schools answered a questionnaire, which showed intrinsic motivation to be most strongly related to reading amount. Perceptions of reading instruction were significantly related to their reading motivation, but only indirectly to the amount of reading. Consistent with previous research, reading motivation, amount of reading, and perceptions of instruction varied by grade levels, with junior secondary students showing higher motivation, higher reading amount, and higher value of instruction than senior students. Interestingly, in a cross-cultural study, Wang and Guthrie (2004) found that the relationship between reading motivation, comprehension, and reading amount were comparable across U. S. and Chinese students. Still, neither of these studies provides information on congruence between instruction that motivates students to read and students' views of motivation.

Some research has focused on general teacher beliefs about students' reading motivation. If reading motivation determines how much students will read (Guthrie & Wigfield, 2000), it likewise contributes to students' comprehension of texts and school success. Interest in reading motivation

is not new, but many questions remain unanswered. Among these are students' perspectives on reading engagement in academic settings, and whether teachers' perspectives on reading motivation are similar to those of their students. According to Applegate and Applegate (2004), what practicing teachers project to their students truly matters; hence, this is an important area to explore.

Thus, the research questions for the present study are as follows:

- What beliefs do teachers have about their students' motivation to read?
- What do students believe would motivate them to read?
- What are the similarities and differences between students' concepts of reading motivation and that of their own classroom teachers?

Methodology

Participants

Six teachers from five states participated in the study: two urban teachers from California, and one teacher each from Maryland, New York, South Carolina, and Texas. The six settings provided contrasts in locations, types of schools, resources, and curricula. We used convenience sampling; participating teachers were chosen based on previous collaboration with the researchers, school settings, and availability. All teachers were experienced and had advanced degrees and certifications.

At the time of the study, Danielle (California, site #1) had taught 10th grade English for 6 years and had completed her Masters in Reading. She taught below-grade-level struggling readers in an urban high school. Danielle was aware that student choice of reading material influences motivation, and she tried to incorporate both multicultural texts and texts that were exciting for her students. Since the students enjoyed realistic fiction, Danielle used her own funds to provide classroom reading materials.

Patty (site #2), also in an urban setting in California, had taught 9th, 10th and 11th grade English for seven years. Based on her observations, she realized that short stories and informational texts appealed to her students. Patty knew from her training in reading instruction that connecting students with high interest texts increases motivation and can be a platform for instruction. With short stories, she was able to incorporate reading strategies that targeted identified weaknesses in comprehension, while informational texts were relevant to their lives.

Rhea had a masters' degree in reading and twelve years of teaching

experience. She taught sixth grade language arts and social studies in a K-8 school, which is located in a large urban, low socio-economic area with a multi-ethnic population. The middle school grades had been added to the school over the previous years as part of an initiative in the city school system to leave middle school students in smaller environments; as a result, the larger middle schools closed. These students were not permitted to use the library of the school since it had been designed for elementary children. Computers were also not available for use by the middle school students since computer lab time was devoted to elementary grade usage. One computer was available in the classroom, but without a connection to a printer.

Maggie (New York), who had a master's degree and 15 years of teaching experience, was a high school English teacher in a low-socioeconomic, rural area in upstate New York. She taught three classes of senior English and one academic literacy course for at-risk freshmen. Across all classes, Maggie perceived a lack of student motivation to read and write. Because of low test scores, the high school had focused on literacy for several years and. Maggie was free to modify the standard curriculum. Consequently, she strove to improve her teaching by focusing on the needs of the students.

Marie was a middle school science teacher at a small, suburban, public charter middle school in South Carolina. Organized in 2006, the school had met Annual Yearly Progress (AYP) each year and offered single gender classes for 200 hundred students in grades 6-8. Students wore school uniforms, and community service was required of all students. Marie had taught middle and high school science and math and had 12 years of teaching experience. At the time of the study, she taught physical science in single gender classes of 18-23 students each and was pursuing National Board Certification. She was also participating in a long-term, professional development project in content area literacy.

At the time of the study Jan had been teaching for more than 12 years and was teaching eighth grade reading in a 6-8 middle school located in a rapidly-growing city on the edge of a large metropolitan area. She had earned a master's degree in reading, as well as Reading Specialist and Library Science certifications. This teacher described the students as being generally on grade level with mid- to high- socioeconomic backgrounds. The classroom had several computers and the teacher reported that most students had computers at home. Jan was clearly interested in motivating her students.

School, classroom, and student demographics are summarized in Tables 1 and 2

Table 1

School and Classroom Demographics

State	Location (Urban, Suburban, Rural)	Content area	Class type
California Site #1	Urban	Reading	Grade 10 Remedial
California Site # 2	Urban	English	Grades 9, 10, & 11
Maryland	Urban	Language Arts Social Studies	Grade 6
New York	Rural	English	1 remedial freshman class 2 heterogeneous senior classes 1 accelerated senior class
South Carolina	Suburban	Physical Science	Single gender
Texas	Urban	Reading	Grade 6

Table 2

Student Demographics Across Sites

Site	Grades	African-American	Caucasian	Hispanic	Native American	Multi-Racial
Maryland	6th	6	19	5		3
Texas	7th	10	56	54	2	9
New York	HS	3	37	4	2	9
California (1)	10th		2	18		
California (2)	10th		2	19		
South Carolina	6th	2	68			1

Materials

Two instruments were used to gather data to answer our research questions. These instruments were designed to explore students' and teachers' perceptions of motivation, including what motivates adolescents to read.

Students' perceptions. Students were assessed using the Adolescent Motivation to Read Survey-Revised (AMRS-R) consisting of 25 multiple choice questions including: inquiries on how adolescents share reading, their technology use, their choices of different reading materials, and their value for reading strategies (Pitcher, Albright, & McNary, 2011). This survey is based on a previously published instrument (Pitcher et al., 2007) that has been revised to incorporate questions about new literacies and instructional practices. The questions also included inquiries about different print resources such as magazines and books to read for information and pleasure. Students were asked about different instructional practices such as choice of reading materials, learning reading strategies, and sharing reading with classmates. The researchers who designed this survey based the questions on what was learned from the first Adolescent to Read Profile study, adolescent literacy research, and teacher input. The survey went through three levels of factor analysis and was administered to over 1,000 students before the final survey was developed. Internal consistency reliability estimates calculated from this sample (Cronbach's alphas) for the three scales were all above 0.70 as presented below in Table 3 (Self Concept as a Reader 0.79, Instruction 0.85, Value of Reading 0.80).

Table 3

Internal Consistency Estimates for the AMRS-R Scales

Subscale	Cronbach's Alpha	Number of Items	Number of Responses	Item total correlation range	Sample Question stem
Self Concept as a Reader	0.79	7	1048	0.41-0.72	12. When it comes to reading books, I am___
Instruction of Reading	0.85	13	1023	0.16-0.71	7. When teachers teach me to summarize what I have read and think about what I've learned, I ___
Value of Reading	0.80	5	1065	0.40-0.71	25. Reading a book is something I like to do

The revised survey yielded a point score on three factors: value of reading, an indication of the value that the respondent placed on reading; value of instruction, which shows how the student regards the kinds of reading activities and strategies teachers use; and the students' self concepts as readers, which indicates how students view their own reading abilities. Points on each question ranged from four points for the most motivated answer and one point for the least motivated. Percentiles were calculated based on student scores compared to the maximum possible score. The survey went through three factor analyses involving over 1000 adolescents to ensure that the questions gathered information appropriate to the factor analyzed. Using the results from the last factor analysis of the AMRS-R administered to 850 students, the scores were ranked according to the number of students who scored in each of the percentiles for each of the three factors; then the percentiles were divided into ranges to interpret the score. See Table 4 for an interpretation of the scores.

Table 4

Interpretation of AMRS-R Scales Point Values

Factor	90-100 Percentile Excellent Range	75-89 Percentile Above Average Range	50-75 Percentile Average Range	25-50 Percentile Below Average Range	0-24 Percentile Lowest Range
Self Concept as a Reader	93-100 points	87-92 points	76-86 points	65-75 points	0-64 points
Instruction	85-100 points	78-84 points	70-77 points	57-69 points	0-56 points
Value of Reading	88-100 points	84-87 points	72-83 points	63-71 points	0-62 points

For the purposes of this study, the class means for the three factors were analyzed to help teachers and researchers better understand how each class viewed motivation. Item analysis of the distribution of the answers from the students at each site highlighted differences between what motivated the students with what teachers believed motivated them. The percentage of students who answered questions positively was also calculated.

One of the researchers from the team analyzed all of the AMRS-R scores and calculated the mean point values for the three factors. Other researchers looked at the answers to specific questions on the survey to analyze particular items that were significant for each site.

Teachers'perceptions. The second question in this study, "What beliefs do teachers have of their students' motivation to read?" is meant to investigate teachers' views of engagement, what counts as reading, and the teachers' beliefs on adolescents' reading preferences match the beliefs of their students. To answer this question, another sub-group of the research team devised and piloted a Teacher Motivation Profile (TMP) consisting of a survey and conversational interview similar to the AMRS-R. The survey consisted of 26 questions focused on teachers' understandings of how their students valued reading. Originally we intended to use the same constructs imbedded in the AMRS-R (self-concept as readers, value of reading, and value for instructional practices), but we found that our questions did not fit so neatly into each category when looked at from a teacher's point of view. The final survey focused on teachers' classroom practices, reading associated activities, and teachers' beliefs about students. See Table 5 for sample questions from each instrument.

Table 5

Sample Constructs in the AMRS and the TMP

Subscale	AMRS-R Sample Question	TMP Sample Question
Self-concept as a reader [or as a teacher]	When it comes to reading books, I am _____ 1. a very good reader 2. a good reader 3. an OK reader 4. a poor reader	My colleagues think I am ___ 1. an exemplary teacher 2. an above average teacher 3. an average teacher 4. a below average teacher
Instruction of reading	When teachers teach me to summarize what I have read and think about what I've learned, I _____ 1. have never been taught this so I don't know 2. am bored 3. find this helpful 4. find this very helpful	I read aloud to my classes: 1. every day 2. almost every day 3. once in a while 4. never

The TMP survey consisted of 26 questions prompting teachers to examine their common classroom practices and knowledge of students' reading preferences. The format was multiple-choice, like the AMRS-R, and included three components: motivational classroom practices,

knowledge of students' personal literacies, and knowledge of students' attitudes toward reading. Items were submitted to a panel of literacy experts to evaluate content validity. Experts assigned items to one of three components, rated the relevance of each item to its component, and added a confidence rating for their scoring. Irrelevant or items with poor inter-rater agreement were dropped. In addition, we addressed teachers' use of technology in education, their support of students' use of technology, as well as multicultural literature and culturally responsive teaching related to literacy. To get some idea of how often teachers implemented certain practices, we included items with answer choices such as "all of the time," "most of the time," "occasionally," " rarely, if ever," and "varies by class." Other frequency questions provided more specific choices, such as "never," twice a year or less," "at least once a month," "once a week or more," and "varies by class."

The Conversational Interview, which accompanied the TMP survey, consisted of open-ended questions about teachers' motivational practices in narrative reading, informational reading, general reading, knowledge of and value for students' personal literacies, and use of technology in education. These data were analyzed through qualitative methods. Each researcher examined the teachers' responses several times to get a sense of the data; and we used the questions in the Conversational Interview to organize teachers' responses and to begin the analysis process. We used member checks when necessary to clarify specific statements. As themes emerged from the data, we individually developed initial codes, followed by recursive rereading of data to further search for patterns that were similar or dissimilar. Moving back and forth between the data sets, we used open coding and axial coding simultaneously so that we could combine related themes into categories of responses and further refine the categories. Categories were compared across teacher participants and then compared with categories and themes from the student responses.

The teachers administered the AMRS-R survey to their students. Each participating teacher completed the Teacher Motivation Profile Survey (TMP) and was interviewed by one of the researchers using the TMP Conversational Interview.

Results

It is important to note in the following discussion that student reading proficiency was based on the teachers' perceptions of student performance in the classroom. In some cases, teachers mentioned results from standardized tests as part of the criteria for identifying students' ability levels. Teacher judgment was important for this study because we looked

at how teacher perceptions of student ability compared to students' self-concepts as readers.

What the AMRS-R and the TMP Revealed

The overall mean point values of the three factors on the AMRS-R were used to understand how the class as a whole rated their motivation. All point values are out of 100 possible points. See Table 6 for an overview of the mean point values at each site.

Table 6

AMRS-R Scale Means Across Sites

Site	Grades	Value of Reading	Instruction	Self Concept as a Reader
Maryland	6th	45	35	46
Texas	7th	44	36	45
New York	HS	33	40	59
California1	10th	36	50	58
California2	10th	50	50	43
S. Carolina	6th	49	51	68
Overall		43	46	55

The analysis of specific items added the most thoughtful consideration of what students valued in their instruction and what they would like to see. In the following discussion, results of the AMRS-R and the TMP are explored at each site. Pseudonyms are used throughout.

The California Sites

On the AMRS-R, Danielle's students (site #1) expressed a very low value of reading at a mean of 36 points. Motivation of instruction was 50 points and their self-concept for reading was 58 points with both means falling in the lowest range on the survey. When looking more closely at value of reading, these students had a low value for reading books (38%) and reading magazines/newspapers (36%). Using computers in instruction (45%) and the instruction of their teacher (40%) did not seem to motivate them. Conversely, they did feel that they were good readers (78%) and that they understood what they read (65%).

During the interview, Danielle acknowledged the influence that education and staff development has had on her career. These experiences

exposed her to a variety of texts and strategies; consequently, she used many reading strategies in her classroom. Likewise, she credited increased technology use in her classroom to her educational experiences. Despite the variety of strategies used, her students' mean value for instructional practices was 50 points, falling in the lowest range.

From Patty's experiences with high school English students (site #2), she realized that they struggled when reading the textbook, yet were motivated when they had reading choices in the classroom. Still, their value of reading and value of instruction were in the lowest percentile range. Patty associated this finding with administrative problems on her campus. She was frustrated at the lack of support for materials, including books that appealed to her students. Patty had limited freedom in making curricular decisions. Her department forbade her to use texts on topics that could be addressed in other classes. Although she realized some of the materials that the students suggested would motivate them, these materials were not available for her to use. Patty knew that her students struggled and that their motivation was low, but her desire to provide support was hindered by institutional policies.

Patty's students' mean value of reading was 50 points, value for instruction also 50 points, but their self-concept of themselves as readers was lower at 43 points. All of these means fell in the lowest percentile range on the survey suggesting that the instruction that Patty was thoughtfully trying to deliver was not motivating to them.

The Maryland Site

In response to the TMP Conversation Interview, Rhea shared her beliefs about adolescent literacy research and practices that would motivate her students. She expressed frustration in knowing what needed to be done, but school and school system restrictions limited her use of more motivational activities.

The curriculum of the school district did not include choice, read-alouds, authentic activities, or use of technology. She was forced to follow the curriculum with fidelity, since supervisors dropped in unannounced to be sure that teachers did not depart from the curriculum. The greater part of class activities and projects mimicked the structure of the state assessment, which required drilling how to answer multiple choice or brief constructed response questions. She explained, "I don't think we have done anything that they really, really enjoyed because everything is so formulaic lately – model, show the graphic organizer, guided practice with the visual organizer – the curriculum is very scripted in that it gives us exactly what to do with the modeling and tells exactly what to do to assess."

Her description of this scripted instruction correlated with the students' overall negative responses on the instruction questions on the AMRS-R (mean of 35 points). The students also had a low value of reading (mean of 35 points) and self-concept as readers (mean of 36 points). All of these means for the different factors fell in the lowest percentile range on the survey. They showed little value for reading books (46%) or magazines/ newspaper (42%) or the instruction of their past teachers (44%) and since they have few opportunities to use computers, their responses to using computers in instruction are the lowest in the study (36%) with many of the answers being that they do not have the opportunity to do this. However, they did show a higher self- concept for how they could read books (77%) and understand what they read (68%).

Nevertheless, Rhea reported on her dedication to making a difference in students' views of reading even in this restricted environment. She tried to assemble a classroom library by searching for different resources. During homeroom and free time, she let the students search the Internet for information that they were interested in and email the resource to her. She then would print out the readings for the students. Students did not do homework because they were not allowed to take any books home. In order to motivate them to read on their own, she allowed them to borrow her own books from her classroom library. She has been amazed that most of her students are excited to borrow the books and bring them back without her having to police the process. Although the curriculum and the environment in which she worked created disharmony between instruction and the students, Rhea utilized her knowledge of reading motivation to create some opportunities for harmony in her classroom.

The New York Site

Of all the sites, survey results from New York indicated the lowest mean for value of reading at 33 points. These results did not come as a surprise to Maggie, who indicated that her students "do not read." When looking at the breakdown of the answers in the value category, the students had the lowest value for reading books (30%) but did not value reading magazines/newspapers much more (36%). Their value for instructional practices also rated at only 40% with a little higher value for instruction with computers (45%) than the instruction of their teachers (40%), again not a surprise to Maggie.

These upstate students averaged 59 points in self-concept of the reader (in the below average range). They were very confident that they were able to read well (73%), but whether they always understood what they read in their personal reading averaged a lower score of 65%. Maggie's

explanation was simple. "They think they're better than they actually are, and some of the students in the accelerated courses are only average readers. They definitely struggle with higher level thinking." Student labels of "average readers" were based on Maggie's observations and students' classroom performance.

Maggie changed her teaching style over the years to meet the needs and interests of her students. She read aloud almost daily and shared magazine and newspaper articles with her class every week. She frequently taught strategies and found it important to make connections with students' lives. One particular activity that illustrated her value for connections was associated with *The Outsiders,* which she read with her academic literacy class, a class of at-risk freshmen who were not performing well in middle school. Maggie had the students compare trends during the time frame of the novel with trends of today, including music, fast food, clothing, gangs, and language. According to Maggie, this activity had been well liked by her students in the past. Still, as stated above, students' rating of instructional practices fell in the lowest percentile range. This low percentile might be because the survey was administered in the Fall when the teacher was just beginning some of these activities.

Maggie also offered choice in projects that connected to students' interests. For example, when reading *Catcher in the Rye* with her seniors, students could opt to create a Myspace profile for the main character, Holden, as a way of gaining insights into the character's personality. Another choice was to create a graphic novel or comic book about the story. A third choice was to create a mixed CD of modern day songs for Holden and to explain in one paragraph per song why Holden would like the song. A fourth choice was to research "depression" in teenagers and connect the symptoms to the main character.

In this population of students who held little value for reading, Maggie's instructional choices were directed at engaging her students in reading so that they would read more, improve their skills, and learn to take pleasure in reading itself. By sharing newspapers and magazines and allowing students to use their knowledge of music and myspace, Maggie was acknowledging her acceptance of and value for alternate forms of literacy that she felt her students would most enjoy. She also reported that her students seemed very motivated to complete the assignments.

The South Carolina Site

Marie selected teaching and learning strategies based on her instructional goals for students. Like Maggie, she made an effort to connect concepts studied in class with real world applications related to students' interests.

For example, when her students were studying chemical reactions, she designed a unit around the chemistry associated with cosmetics for her female physical science classes. During her chemical reaction unit, she located readings about the chemistry and history of cosmetics. These external connections to authentic uses for science concepts as well as to other content areas were important to promote students' motivation to learn science. Marie also used a wide variety of text in addition to the class textbook, which was available to students online.

Marie's students' responses to the AMRS-R indicated that they have a below average self-assessment of their reading ability, with a mean of 68 points in the category of self-concept. When looking at the breakdown of whether they were good readers, the percentage was high (88%), meaning that they had a strong self-concept of being good readers. Their belief in their ability to understand what they read was almost as high (76%). Their value of reading, though, was in the lowest percentile range with an average mean of 49 points in the value category with a very low value of reading books (37%) and a little higher value for newspapers/magazines (48%). Given that these students are sixth graders and attend a charter public school, these scores are not unexpected. However, their scoring in the lowest percentile score of 51 points in the instructional category indicates a disharmony between the teacher's observed instructional strategies and the perceptions of her students. They seemed to be motivated less by how computers are used in instruction (40%) than by the instruction of their teachers (51%).

Marie focused on students' learning science and being motivated to search for answers to their own questions. At the beginning of each year, she used an interest inventory to determine her students' interests. This enabled her to connect the curriculum to the students' real world. When Marie read aloud to her students, she would think aloud to make her thinking public for her students so that they could understand both the content and the process involved in learning the content. She used literacy strategies to increase students' learning of science and improve their ability to deal with the ever-increasing complexity of scientific concepts.

The Texas Site

Jan's responses to the Conversational Interview revealed conflict between her desired attempts to motivate her students and her perceived restrictions of the curriculum. Although the pressure of the state's assessment was similar to the Baltimore site, this school district relied less on a scripted curriculum; however, Jan still keenly felt the demands of covering the curriculum and being restricted by "time," using this term

four times during the interview. She mainly used the textbook because it addressed the different genres the students needed to know for the state test. She described how both she and the students usually feel "hurried and stressful" and stated that the emphasis is on quantity, not quality. Sadly, results from the student surveys support these perceptions.

These Texas students showed a very low value of reading (mean of 48 points), which was influenced by their low value for reading books (38%) and only a slightly higher value for reading magazines/newspapers (48%). They seemed not to be very motivated by instruction with an overall mean of 36 points scoring in the lowest percentile, which seemed to be most influenced by the lack of motivation for the instruction of the teachers (22%), though they did value the use of computers in instruction more (50%). Their self-concept as readers was also in the lowest range (mean of 45 points), but they did seem more comfortable in what they read (63%) and how they understood their personal reading (69%).

Nevertheless, Jan was thoughtful and committed in her attempts to motivate students to read, and student survey results indicated that these are in "harmony" with her students' views of motivation. Her main strategies revolved around the intent of "getting their attention" and "making them love it." Although relying largely on the textbook, she also used alternate materials such as newspapers, play scripts, magazines, and picture books in her instruction. She often read aloud, and the student results for read-alouds showed high value for this practice. She also did her best to relate the readings and curriculum to the students' lives by utilizing their prior knowledge and considering and encouraging "their perspective." Responses from the students suggested that this approach is working well. Two-thirds of the students shared that it was very helpful or helpful when the teacher encouraged connections during reading.

The foremost area of disharmony was related to computer use. Jan made few references to electronic texts and only discussed them when asked about them, although she did have a teacher website that she updated frequently. She realized that the adolescents valued the use of computers and used them often outside of school, but she expressed a somewhat negative view of the Internet and its social networking sites. Students, however, indicated that the use of computers was motivating to them.

Still, with such a low overall value for instructional practices (mean of 36 points falling in the lowest percentile range), the pressures of curriculum coverage and other restrictions may have outweighed Jan's attempts at motivation. Students' low value for themselves as readers (mean of 45 points) may be another mitigating factor. Since the overall results from this site may paint a less than positive picture, they suggested more room for

flexibility in Jan's teaching approaches. Therefore, continuing her efforts at motivation and broadening her view of literacy, as with the use of electronic texts, may be more fruitful than restrictions in the race against "time."

Across All Sites

All teachers used research-based principles and strategies to motivate their students to learn and to love reading. The range of curricular freedom experienced by the teacher varied from almost complete freedom (provided the materials were based on the standards) to almost no freedom at all with formulaic, scripted teaching to the test mandated and enforced by supervisors. Pressures on teachers included lack of curricular freedom, lack of materials, lack of access to technology, and lack of time.

We considered how motivation is related to the success of today's adolescents in light of the tension that exist between curricular demands and adolescents' interests and needs (Conley & Hinchman, 2004; Kamil et al., 2008). Conley and Hinchman pointed out that NCLB (Bush, 2001) fails to mention these two critical areas that are recommended in adolescent research. The bill offers no solutions to the dilemmas posed by adolescents who fail because they lack interest in the game of school, nor does it touch on issues caused by school systems that favor print literacy over technologically based literacies. Lapp and Fisher (2009) further suggested that students are intrinsically motivated to read when "their voices and interests were driving the text selections and conversations" (p. 560).

Discussion

In this study we tried to determine whether teachers understood what motivated their students to read. We used the AMRS-R and the TMP to compare the views of students to the instructional practices and beliefs of their teachers. We then compared the students' views to the teachers' beliefs. We learned from the study that other factors beyond the teachers' control often thwarted implementation of some motivational classroom practices. From the results, several themes emerged and can be used to inform research and teaching.

Adolescents shared an overall low value for reading and did not find their instruction motivating. From the AMRS-R, we learned that students value choice of both reading materials and activities, but teachers reported limitations in being able to implement choice. Although all of the teachers in this study were highly qualified, restrictions in curriculum and/or resources limited their efforts to engage students, thus creating disharmony. Student ratings for value of reading were higher than their value of instruction, but some teachers perceived that students did not

really understand their lack of higher-level comprehension skills. This second disharmony might be due to differences in the way students and teachers define good readers. Students tended to define good readers as those who read the words quickly, whereas teachers were more concerned with how well the reader comprehended (Pitcher et al., 2007). As suggested by past research, teachers may misinterpret lack of motivation to read as lack of comprehension skills (Alvermann, 2003; Guthrie, Coddington, & Wigfield, 2009). At the same time, there is a difference between students' motivation toward literate activities outside of school as compared to academic reading, but students do not always consider reading and writing for personal pleasure as reading (Pitcher et al., 2007). Such findings point to many areas of disharmony that need further study.

The AMRS-R results across the three constructs (Value of Reading, Instruction, and Self-Concept of the Reader) paint a negative picture of how students in this study viewed reading and what motivates them to read. All of the overall averages for the different factors across the sites fell in the below average or lowest range compared to the group used to standardize the instrument. These averages indicate that in these sites there was little harmony in how teachers were addressing motivation to read and how students perceived these efforts. Since research that suggests low motivation for reading can be a factor in low adolescent literacy achievement (Alvermann, 2003; Berman & Biancarosa, 2005; Biancarosa & Snow, 2004; Kamil et al., 2008), it becomes imperative to take a closer look at students' perceptions of motivation and to readjust teachers' perceptions. In the broader sense, lack of understanding and resources are major obstacles in the national effort to change adolescent reading achievement.

Lessons Learned

One of the important lessons that can be learned from this research is the need for teachers to understand what will motivate their students to read. As Alvermann (2003) suggested, one of the reasons for adolescents' low reading achievement is that they choose not to read. We found a lack of congruence between what teachers perceive as motivating and what students actually value. Additionally, even when teachers are aware of what will motivate their students, the students generally want what teachers are often unable to provide. For example, the major theme of choice emerged from the AMRS-R data; at the same time, the major themes of curricular restrictions, scripted programs, and specific texts emerged from the TMP. Teachers also reported a lack of appropriate materials, including computers, to use in their instruction. Such opposing forces

cause disharmony. When such disharmony exists, teachers must speak for the unheard voices of their students. Many of the teachers in this study reported being restricted in making informed choices for their students by the curricular demands over which they had little control. They often knew what would motivate their students, and in some cases the teachers were highly qualified literacy specialists, but many were unable to make more engaging choices for their students. In spite of the recommendations by Bates, Breslow, and Hupert (2009) for importance of literacy specialists in secondary schools, the ones in this study were unable to use their training to the maximum degree.

Furthermore, lack of congruence between teachers and students involved technology use. Some of the teachers in this study did not realize the value of technology in their students' lives, yet students reported daily computer use. Even for those teachers who did recognize its value, computers and technology resources were unavailable in their classrooms, further complicating attempts to incorporate technology in meaningful ways.

Despite curriculum mandates, all the teachers in this study made noteworthy attempts to include reading materials in their classes that would motivate their students to read, and in some cases, they had to supply the materials themselves. Fisher and Frey (2007) suggest that, while we cannot change all variables in a school setting, there are definitely a number that are under the teacher's control. The teachers in this study did control some variables in a range of ways, as in the following examples:

- Rhea (Maryland) did not have motivating reading materials for her students, so she used Internet resources that the students chose themselves.
- Maggie (New York) offered a choice of activities from pop culture to motivate her students when reading Catcher in the Rye.
- Marie (South Carolina) used read alouds, reading materials other than the textbook, and projects that connected to her students' interests.
- Jan (Texas) also read aloud and she incorporated alternate materials such as newspapers, magazines, and picture books into her instruction.

These examples demonstrate how some teachers attempted to address motivation in spite of obvious challenges.

Limitations

One of the most problematic limitations for this study is one that is common to research in secondary schools: student participants had several

teachers each day, so it is unclear whether student survey responses reflected the instructional activities of all their teachers or whether they were confined to the teachers participating in this study. In addition, we did not have access to all class level types (standard, in-class support, honors, etc.), percentages of students on free and reduced lunch, student attendance records, or whether all students present (when the survey was administered) actually participated. Also, the student survey was administered in the fall of the school year before some of the teachers' principles and strategies had been fully implemented. Interpretations from the surveys help us to better understand adolescent motivation to read and should not be construed as a negative reflection on teachers. Finally, both the TMP and AMRS-R are in development and have yet to be studied alongside other measures of reading motivation or performance. How these measures correspond with other constructs related to adolescent reading experience is not yet known. However, content validity review of the TMP, evidence of high internal consistency for the AMRS-R, and the provocative patterns of mismatch revealed between student motivation and teacher perception between these measures suggest promise.

Conclusions and Implications

Based on the AMRS-R survey and the TMP survey and interview, we offer some tentative conclusions. First, our results imply cause for further attention to adolescent motivation as it relates to curricula. Teachers in this study felt a strong sense of disempowerment. Contextual factors such as pressure from administration created a barrier to implementation of motivational practices. This leads us to question whether administrators are aware of the importance of motivation to read. Teachers need to be empowered to make decisions on pedagogy, methodology, and instructional materials.

Secondly, based on students' overall low motivation to read results on the survey, it is unlikely that these teachers' practices were capturing the students' interests to a great degree – or perhaps not capturing the interests of all students. To better understand what motivates students, we suggest the following as informative sources of students' perspectives: interest inventories, as carried out by Marie; student-written reflections; and the AMRS-R. Additionally, the Adolescent Motivation to Read Conversational Interview (Pitcher et al., 2007) could help teachers better understand how reading can be a more positive experience. Once teachers have evidence of the motivational needs of their students, they could design instruction around these needs and communicate with administrators. Further, we suggest that teachers use instructional practices that promote

comprehension, and explicitly teach students how to monitor their own comprehension.

Since students reported technology as a motivating factor, and teachers reported lack of sufficient computers in the classroom, teachers can still find ways to integrate technology into their instruction. For example, Maggie reserved the computer lab whenever her students were working on a project. Rhea allowed students to explore topics of interest on the Internet during homeroom and free time, and would make sources available for students to read at home. Other possibilities for computer use include using computers at the public library, sharing computers with a friend for assignments, and checking out school laptops where available. In classrooms, an LCD projector can easily make some Internet resources available to a whole class and give teachers the opportunity to share sites and resources with students that might further their motivation and independent reading. Smartphones, which are actually powerful computers, can be a window on the world through web browsers, applications, and two-dimensional barcodes that connect the cell phone to other information (Williams & Pence, 2011), providing students answers to their own questions.

Technology resources must be recognized as a crucial part of reading material in any classroom and woven into curricula, particularly since digital forms of reading and writing have become a part of everyday literacy (Coiro, Knobel, Lanskhear, & Leu, 2008). Research shows that in order to improve student engagement, schools must enable students to experience the power of learning in these different types of environments. It is also important that teachers understand how these tools can be customized to improve learning for all students (Summit on Redefining Teacher Education for Digital-Age Learners, 2010).

Overall, results from the sites in this study indicate a need for flexibility in teaching approaches. When considering the types of instruction to employ, it is important for teachers to know adolescents' interests and to assess their level of motivation towards reading materials and the instructional activities that accompany them. More research is needed on factors that hinder adolescent motivation to read as well as teaching practices that foster it.

We realize that not all instruction can be motivating to every student, but we believe that every student can be reached at some level. We need to keep in mind Alvermann's (2001) notion of self-efficacy and engagement as part of effective literacy instruction. We believe that if literacy achievement is to improve, we need to keep in mind what adolescents need and deserve.

References

Applegate, A. J., & Applegate, M. D. (2004). The Peter Effect: Reading habits and attitudes of preservice teachers. *The Reading Teacher, 57*(6), 554-563.

Alvermann, D.E. (2001).*Effective literacy instruction for adolescents*. Oak Creek, WI: National Reading Conference. Retrieved from http://www.nrconline.org/PolicyBriefs.html

Alvermann, D. E. (2003). *Seeing themselves as capable and engaged readers: Adolescents and remediated instruction*. Naperville, IL: Learning Point. Retrieved from http://www.learningpt.org/pdfs/literacy/readers.pdf .

Bates, L. Breslow, N., & Hupert, N. (2009). *Five states' efforts to improve adolescent literacy (Issues & Answers Report, REL 2009-No. 067)*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast and Islands.

Berman, I. & Biancarosa, G. (2005). *Reading to achieve: A governor's guide to adolescent literacy*. Washington: DC: NGA Center for Best Practices. Retrieved from http://www.nga.org/cms/home/nga-center-for-best-practices/center-publications/page-edu-publications/col2-content/main-content-list/reading-to-achieve-a-governors-g.html .

Biancarosa, G. & Snow, C. E. (2004). *Reading next—A vision for action and research in middle and high school literacy: A report from Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.

Bush, G. W. (2001). *No child left behind: Executive summary*. Washington, DC: U.S. Department of Education.

Casey, H. K. (2008). Engaging the disengaged: Using learning clubs to motivate struggling adolescent readers and writers. *Journal of Adolescent & Adult Literacy, 52*(4), 284-294.

Coiro, J., Knobel, M. Lankshear, C., & Leu, D. (2008). Central issues in new literacies and new literacies research. In J. Coiro, M. Knowbel, C. Lanshear, and D. Leu (Eds.) *Handbook of research on new literacies* (pp. 1-22). Mahwah, NJ: Erlbaum.

Conley, M. W., & Hinchman, K. A. (2004). No Child Left Behind: What it means for U.S. adolescents and what we can do about it. *Journal of Adolescent & Adult Literacy, 48,* 42-50.

Eccles, J. S., Lord, S., & Buchanan, C. M. (1996). School transitions in early adolescence: What are we doing to our young children? In J. A. Graber, J. Brooks-Gunn, & A. C. Peterson (Eds.), *Transitions through adolescence: Interpersonal domains and context* (pp. 251-284). Hillsdale, NJ: Erlbaum.

Fisher D., & Frey N. (2007). A tale of two middle schools: The differences in structure and instruction. *Journal of Adolescent & Adult Literacy, 51,* 204-211.

Gottfried, A. E. (1990). Academic intrinsic motivation in young elementary school children. *Journal of Educational Psychology, 82,* 525-538.

Gottfried, A. E., Fleming, J. S., & Gottfried, A. W. (2001). Continuity of academic instrinsic motivation from childhood through late adolescence: A longitudinal study. *Journal of Educational Psychology, 93,* 3-13.

Guthrie, J. T., & Anderson, E. (1999). Engagement in reading: Processes of motivated, strategic, knowledgeable, social readers. In J. T. Guthrie & D. E. Alvermann (Eds.), *Engaged reading: Processes, practices, and policy implications* (pp. 17-45). New York, NY: Teachers College Press.

Guthrie J., Coddington C., & Wigfield A. (2009). Profiles of reading motivation among African American and Caucasian Students. *Journal of Literacy Research, 41*, 317-353.

Guthrie, J. T., & Davis, M. H. (2003). Motivating struggling readers in middle school through an engagement model of classroom practice. *Reading and Writing Quarterly, 19,* 59-85.

Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M.L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (pp 403-422). Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

Guzzetti, B.J. (2002, September). "This place has no atmosphere": Secondary students' reports of and suggestions for literacy in science". Paper presented at the International Conference on Science and Literacy, Ontological, Epistemological, Linguistic and Pedagological Considerations of Language and Science Literacy: Empowering Research and Informing Instruction, Victoria, BC, Canada.

Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A Practice Guide* (NCEE#2008-4027). Washington, DC: National Center for Educational Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc.

Lapp, D., & Fisher, D. (2009). It's all about the book: Motivating teens to read. *Journal of Adolescent & Adult Literacy, 52,* 556-561.

Lau, K. (2009). Reading motivation, perceptions of reading instruction and reading amount: A comparison of junior and senior secondary students in Hong Kong. *Journal of Research In Reading, 32*(4), 366-382.

National Council of Teachers of English (2007). *Adolescent literacy: A policy research brief.* Urbana, IL: National Council of Teachers of English.

National Center for Education Statistics (2009). *The nation's report card: Reading 2009* (NCES 2010–458). Washington, D.C.: Institute of Education Sciences, U.S. Department of Education.

Pachtman, A. B., & Wilson, K. A. (2006). What do the kids think? *The Reading Teacher, 59,* 680-684.

Peetsma, T., Hascher, T., van der Veen, I., & Roede, E. (2005). Relations between adolescents' eelf-Evaluations, time perspectives, motivation for school and their achievement in different countries and at different ages. *European Journal of Psychology of Education,* 20 (3), 209-225.

Pitcher, S. M., Albright, L. K., Delaney, C. J., Walker, N. T., Seunarinesingh, K., Mogge, S., Headly, K. N., Ridgeway, V. G., Peck, S., Hunt, R., & Dunston, P. J. (2007). Assessing adolescents' motivation to read. *Journal of Adolescent & Adult Literacy 50* (5), 378-396.

Pitcher, S. M., Albright, L. K., & McNary, S. (2011). Adolescent Motivation to Read Survey Revised. Manuscript in preparation.

Quirk, M., Unrau, N., Ragusa, G., Rueda, R., Lim, H., Velasco, A., & Fujii, K. (2010). Teacher beliefs about reading motivation and their enactment in classrooms: The development of a survey questionnaire. *Reading Psychology, 31,* 93-120.

Redefining Teacher Education (2010). A call to action: The summary report of the invitational summit on redefining teacher education for the digital-age learners. Retrieved from http://redefineteachereducation.org/sites/default/fles/SummitReport.rdf?q+summitreport

Reeves, A.R. (2004). *Adolescents talk about reading: Exploring resistance to and engagement with text.* Newark, DE: International Reading Association.

Shaaban, R. (2006). An initial study of the effects of cooperative learning on reading comprehension, vocabulary acquisition, and motivation to read. *Reading Psychology, 27,* 377-403.

Schussler, D. L. (2009). Beyond content: How teachers manage classrooms to facilitate intellectual engagement for disengaged students. *Theory Into Practice, 48,* 114-121.

Sizer, T. R., & Sizer, N. F. (1999). *The students are watching: Schools and the moral contract.* Boston, MA: Beacon Press.

Tilley, C. L. (2009). Reading motivation and engagement. *School Library Monthly, 26* (4), 29-42.

Unrau, N., & Schlackman. (2006). Motivation and its relationship with reading achievement in an urban middle school. *The Journal of Educational Research, 100,* 81-101.

Verhoeven, L., & Snow, C. E. (2001). Literacy and motivation: Bridging cognitive and sociocultural viewpoints. In L. Verhoeven & C. E. Snow (Eds.), *Literacy and motivation: Reading engagement in individuals and groups,* (pp. 1-20). Mahwah, NJ: Erlbaum.

Wang, J. H., & Guthrie, J. (2004). Modeling of effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly, 39,* 162–186.

Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology, 89,* 420-432.

Williams, A. J., & Pence, H. E. (2011). Smart phones, a powerful tool in the chemistry classroom. *Journal of Chemical Education, 88*(6), 683-686.

Young, J.P., & Brozo, W.G. (2001). Boys will be boys, or will they? Literacy and masculinities. *Reading Research Quarterly, 36*, 316–325.

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Year One of a Longitudinal Literacy Professional Development Initiative in an Urban School

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The teacher is the most important in-school factor influencing students' literacy achievement Therefore, professional development supporting teacher effectiveness is a primary means of enhancing students' literacy learning. This article describes the beginning of a longitudinal, collaborative professional development initiative that is based upon a school-university partnership in a high-need, urban elementary school. Prior to the initiative, a mere 28% of students scored at or above proficiency. This case study used mixed methods to study a school-wide professional development program. We found positive perceptions of the initiative as well as areas on which to focus on moving forward. In addition, after the first year of the initiative, while only 29% of students scored at or above proficiency, students in this school showed statistically significant gains on standardized assessments of literacy.

The No Child Left Behind (NCLB, 2002) legislation mandates "high-quality" professional development (PD) to ensure "high-quality" teachers in

every classroom (Desimone, 2009). This mandate is likely due to evidence that the teacher is the most important in-school factor influencing student achievement (Bean & Morewood, 2011; Bransford, Darling-Hammond, & LePage, 2005). At the same time, the National Assessment of Educational Progress (NAEP, 2011) demonstrated a reading achievement gap between Black and White students in the United States. Researchers have found that minority students in urban schools have fewer high-quality teachers than their White suburban peers (Lankford, Loeb, & Wyckoff, 2002).

Consequently, many urban schools and school districts have adopted widespread PD emphasizing literacy instruction as a primary strategy for closing the achievement gap (Hirsh, 2005). Yet, despite federal, state, and local mandates and accountability measures to close this achievement gap, urban school districts across the nation still struggle to reverse underachievement patterns (Doubek & Cooper, 2007). While research has indicated that effective literacy PD is sustained, collaborative, school-based, and job-embedded (Dillon, O'Brien, Sato, & Kelly, 2011), there is still much to learn about teachers' perceptions of and students' achievement during PD. In particular, more research on collaborative literacy PD initiatives in urban schools and their relationship to students' achievement is needed (Au, Raphael, & Mooney, 2008). The current study was designed to address these gaps.

Related Literature

There is growing consensus in the research literature regarding what constitutes effective literacy PD. Seven principles from this literature framed our work: Effective PD is: (a) ongoing and sustained, (b) closely aligned with the schools' student learning goals, (c) guided by strong leadership, (d) focused on student learning and best practice, (e) supportive of teachers, (f) collaborative, and (g) guided by student assessment data (Anders, Hoffman, & Duffy, 2000; Bean & Morewood, 2011; Dillon et al., 2011; Duffy, 2004; Taylor, Raphael, & Au, 2011; Taylor, Pearson, Peterson, & Rodriguez, 2005; Walpole & McKenna, 2004).

Although there is consensus about the components that comprise high-quality PD, research needs to explore the process by which PD initiatives are successful (Bransford, Brown, & Cocking, 2000; Scott, Cortina, & Carlisle, 2012). To date, we know very little about how and what teachers learn from PD (Correnti, 2007; Fishman, Marx, Best, & Tal, 2003). Desimone (2009) notes that PD initiatives need to have at least 20 hours of contact with teachers to support instructional change. In addition, she calls for examinations of PD that demonstrate responsiveness to teacher needs through observations and interviews.

The current study is grounded in Fishman and colleagues' (2003) model of teacher learning. The model presents a system that considers a number of contextual factors that influence the implementation of PD efforts and how those efforts influence student achievement. This system is based on an interactive relationship between teacher knowledge, perceptions, and attitudes; it provides an interpretation of student academic performance through different types of assessment (e.g., student learning); and classroom enactment (e.g., teaching). The researchers assert that the teacher factors (knowledge, perceptions, and attitudes) are strongly influenced by student performance. That is, if teachers see gains or changes in student learning, they are more positive about the PD and more likely to implement reform efforts. At the same time, the system demonstrates how the student factors (learning measured by multiple instruments) are equally influenced by teacher enactment of reforms and aforementioned teacher factors.

The present article describes Year 1 of a longitudinal, collaborative literacy PD initiative in a high-poverty, urban charter school. To improve students' literacy achievement, the school supplemented its scripted basal reading program with guided reading materials to facilitate differentiated literacy instruction (Fountas & Pinnell, 1996). School leaders invited university-based literacy researchers to provide PD introducing guided reading as an instructional technique. Recognizing that isolated PD sessions do little to promote sustained instructional improvement (Anders et al., 2000; Duffy, 2004), the university and school personnel designed an ongoing initiative to enhance teachers' literacy instruction and students' literacy achievement. Accordingly, the research team, composed of university- and school-based faculty, used a formative design (Bradley & Reinking, 2011) to document the ongoing PD, teachers' instruction, and students' achievement. This research was formative because ongoing data analysis informed subsequent research decisions (Bradley & Reinking, 2011). Therefore, the first year was treated as a needs assessment year: Data were collected as a means to establish a baseline understanding of typical instruction in the school and to provide insight into important next steps in the longitudinal PD initiative.

The first year of this study examined teachers' perceptions, teachers' instruction, and students' learning. Researchers have demonstrated the value of identifying teachers' perceptions of PD as a measure of success (Scott et al., 2012). The exploration of teachers' perceptions provides PD developers and facilitators the opportunity to ascertain classroom teachers' needs for future PD opportunities (Fishman et al., 2003; Kennedy & Shiel, 2010). This study sought to identify the faculty members' needs in order to lay the groundwork for Year 2 of the initiative and beyond. The research

questions examined were:

1. What are teachers' and school leaders' perceptions of the PD initiative?
2. What are teachers' and school leaders' perceptions of change in literacy instruction in light of the PD initiative?
3. What does typical literacy instruction look like in the context of the first year of a longitudinal PD initiative?
4. What are teachers' reflections on their own literacy instruction?
5. How do students perform on standardized tests of reading?

Theoretical Lens

A situated perspective of learning (Brown, Collins, & Duguid, 1987) framed this research. The basic premise of this perspective is that learning involves more than the cognitive self: Learning is a phenomenon that is socially constructed, situated in activity, and distributed among participants (Lave & Wenger, 1991; Putnam & Borko, 2000). Research on school reform has demonstrated that schools must have the capacity to address continually changing demands and to utilize and create resources and structures that will enable their students to achieve at high levels (Fullan, 2007; Stoll, 2010). Therefore, improvement is by default a very situated activity that occurs within the daily work and implicit assumptions of a school. As such, this perspective lends itself to a formative design that is systematically modified based upon ongoing understandings of teachers' instruction and students' performance.

Previous literature led the research team to believe that teachers and school administrators would have positive perceptions and be willing to implement change because they had agency in the initiative. In addition, the researchers understood that education reform is often slow and met with resistance (Gusky, 2002); thus, the researchers anticipated that after just the first year, there would be minimal change in observed instructional practices and there would not be statistically significant growth in student achievement.

Methods

We used mixed methods (Creswell, 2005) within a formative case study design to explore Year 1 of a longitudinal literacy PD initiative in a high-needs, urban school. A case study is appropriate for this research

because we examined complex phenomena, teacher perceptions and student learning, within the specific context of a single school (Yin, 2009). Case studies are especially useful when contextual factors cannot be separated from the phenomena, as in this study (Yin, 2009). We used qualitative methods to address the first four research questions regarding participants' perceptions and instruction. Quantitative methods were used to analyze Research Question 5 regarding student performance.

Setting

This study takes place in a Title I, urban elementary charter school in the Mid-Atlantic region. Originally chartered in 2000, the students are primarily African American (98%), with 86% eligible for free or reduced-price meals. Approximately 600 kindergarten though sixth grade students attend the school, with approximately 30 students per class. Classrooms occupy most of the three-story building building's available space: The arts and physical education specialist teachers move from room to room, and students eat their meals in their classrooms. There is a small playground and athletic field within a fenced area surrounding the building.

Like many urban schools, this school has difficulty recruiting and retaining highly qualified teachers and specialists. Indeed, a majority (roughly 60%) of the teachers lack formal teacher preparation. Faculty and administrative turnover is high, and roles change rapidly within the school's structure. The school's reading achievement scores for the 2009-2010 school year were alarmingly low: Only 28% of students scored at or above the proficient level.

Participants

Participants included 35 teachers, 20 support staff, and six school leaders (two reading specialists, the instructional coach, the data manager, the librarian, and the principal) with minor variation in participation based upon teacher absences and school needs. Most participants were African American, with two White participants and two of other ethnic descent.

We collected qualitative data from focal teachers (one at each grade level K-6, Table 1) and the six school leaders listed above who were selected using convenience sampling. A reading specialist familiar with all faculty members nominated each focal teacher, who in turn agreed to participate. While it is noteworthy that only two focal teachers held traditional certification credentials, the supervising public school district does not require charter school teachers to hold a teaching license.

Table 1

Focal Teachers

Pseudonym	Grade	Year Teaching	Certification
Mr. K	K	2nd	Emergency
Ms. I	1	9th	University
Ms. C	2	1st	Emergency
Ms. U	3	1st	Alternative
Ms. D	4	3rd	University
Mr. B	5	1st	Alternative
Ms. E	6	20+	Emergency

The Professional Development

The first year of the PD effort included four whole-school sessions emphasizing effective literacy instruction with a focus on guided reading. Two university professors with literacy expertise (the first two authors) conducted the sessions. Session 1, a four-hour morning session held in August 2010, gave an overview of a balanced literacy framework, guided reading, and running records (Cunningham & Allington, 2007; Fountas & Pinnell, 1996). With the entire faculty present, guided reading lessons were modeled and discussed, running records were introduced and practiced, and teachers were encouraged to begin grouping students for needs-based instruction. To close the session, the reading specialists and administrators encouraged teachers and staff to try the techniques and share their progress with colleagues.

Session 2, held in October 2010, spanned the workday from 8:00 a.m. until 4:00 p.m. All faculty and staff attended to ensure that every adult in the building understood the instructional initiative. The daylong event was broken into smaller sessions tailored to grade-level needs. First, teachers viewed and critiqued videos of guided reading instruction selected from a variety of preservice teacher preparation collections. Next, they practiced taking and analyzing running records in order to learn to use data to inform their instruction. Later, a school reading specialist shared pacing ideas with grade-level groups of faculty. We ended the day with an extensive Q&A discussion where all participants shared their successes and concerns with guided reading processes.

Session 3 occurred in early January 2011 and was shared with the entire teaching faculty. In this half-day session, teachers analyzed videos of school colleagues engaged in guided reading instruction. The

participating teachers shared commentary on their guided reading lesson planning and implementation, including management and small group facilitation. Later, faculty shared their running records and connected informal reading assessment to lesson planning. They discussed how informal assessments contrasted with the formal assessments used in the school. Similar to Session 2, we ended with a teacher-led discussion of ongoing management and implementation issues.

Session 4, held in a two-hour afterschool session in late January 2011, utilized a make-and-take format to help teachers manage station-based reading instruction while conducting guided reading groups. University personnel and school leaders collaboratively designed and facilitated the stations. Working with grade-level colleagues, teachers circulated through a variety of word recognition, fluency, vocabulary, and comprehension activity stations designed for students' independent practice after guided reading group work. Teachers sampled each student activity and recorded their ideas for implementation. Within each activity, facilitators and teachers discussed techniques for adaptation and differentiation based on specific student developmental and curricular needs.

An example of a fluency center was an activity designed to help older students learn phrasing skills. Teachers were given three different colored highlighters and three copies of the same brief passage. They worked together to highlight phrase chunks in the passage to show where the reader should pause for emphasis, or for punctuation. Then they repeated the highlighting with the other copies to try different phrase groups. To complete the activity, they read each highlighted passage aloud, pausing at their predetermined points, and decided which sounded most fluent. A comprehension center designed for younger students emphasized sequencing. One teacher in each group read a familiar storybook aloud. Next, the other teachers placed enlarged copies of the book's pages in order on the floor. They then walked along the story pages and retold the story while one followed along in the book and checked the sequence.

In addition to these formal PD sessions, school leaders, specialists, and university facilitators provided ongoing support for teachers as they worked to improve their literacy instruction. For example, the reading specialists observed teachers' guided reading instruction and provided feedback using a guided reading rubric the PD leaders collaboratively created. The librarian helped teachers select appropriate texts for their literacy instruction. University facilitators planned and modeled four guided reading lessons in three different teachers' classrooms. Ultimately, teachers had substantially more than 20 contact hours with university personnel, school leaders, and reading specialists, as recommended by

Desimone (2009). Teachers received roughly 18 hours of PD in the whole-school sessions, PD leaders spent at least two hours modeling instruction for teachers in their classrooms, and PD leaders observed roughly 20 hours of instruction providing feedback.

Data Collection

To answer the research questions, we collected post-PD questionnaires, school leader interviews, focal teacher observations, focal teacher interviews, end-of-year questionnaires, and student standardized test scores. Table 2 displays how we used multiple sources to address the research questions.

Table 2

Matrix of Data Sources Addressing Research Questions (RQ)

	RQ1	RQ2	RQ3	RQ4	RQ5
Post-PD questionnaires	X				
School leader interviews	X	X			
Focal teacher interviews	X	X		X	
Focal teacher observations			X		
End-of-year questionnaires				X	
Student standardized tests					X

Post-PD questionnaires. Immediately following each PD session, all participants anonymously completed a questionnaire regarding their reflections on the session. This questionnaire asked what was most and least helpful, what they learned, and what they would like to learn more about (see Appendix A).

School leader interviews. In addition, an administrator, two reading specialists, a curriculum coach, and a data manager were interviewed at the end of the year to obtain their reflections on the initiative and the instruction they observed in the school (see Appendix B). Each interview was audiotaped and transcribed.

Focal teacher observations. Seven focal teachers were each observed once in January, February, or March. University-based PD leaders conducted classroom observations (70-120 minutes each) and recorded field notes detailing each focal teacher's literacy instruction (grouping, texts, activities, etc.) (see Appendix C for the observation protocol).

Focal teacher interviews. Following each observation, the observer interviewed the focal teachers to capture their reflections on the observed

lesson, the degree to which the PD informed their teaching, and their perceptions of their students' literacy progress (see Appendix D for the interview protocol).

End-of-year questionnaires. All teachers completed an end-of-the-year questionnaire that asked about their level of guided reading implementation, their comfort level with literacy assessment and instruction, and their reflections on the effectiveness of their literacy instruction (see Appendix E).

Student standardized assessment scores. We collected the students' scores on a school administered standardized test of reading for both 2010 (the year before the study began) and 2011 (after Year 1 of the PD initiative). The standardized test is first administered to third-grade students, so we collected assessment results for students in grades 4, 5, and 6 in the 2010-2011 school year in order to have pre and post data.

Data Analysis

Following the recommendations of Miles and Huberman (1994), qualitative data analysis included *reducing* the data, *displaying* the data, and *drawing conclusions*. To answer Research Question 1 (What are teachers and school leaders' perceptions of the PD initiative?), we analyzed the post-PD questionnaires, school leader interviews, and focal teacher interviews. To analyze the data obtained in the post-PD questionnaires, we extracted the responses related to the research question, specifically, "What content or activities in today's PD were most and least helpful?" We reduced these data using open coding processes; that is, two researchers separately read through the responses applying codes to "name" the content or activities described on the questionnaire (Creswell, 2007). With codes established, the researchers used HyperRESEARCH, a qualitative data analysis computer program, to capture frequency counts of the codes related to aspects of the PD teachers' valued (found most helpful) and did not value (found least helpful). To analyze the interviews, three researchers read the interview transcripts separately. These data were reduced as researchers identified segments of text related to the research question. Data were further reduced through the coding process where researchers repeatedly read through the identified segments of text "naming" the participants' perceptions of the PD (Creswell, 2007).

To answer Research Question 2 (What are teachers and school leaders' perceptions of change in literacy instruction in light of the PD initiative?), we analyzed focal teacher and school leaders' interviews. Data analysis consisted of the same processes described above. Three researchers read

the interview transcripts separately and identified segments of text related to the research question. Data were reduced through the coding process where researchers repeatedly read through the identified segments of text "naming" the participants' perceptions of the PD (Creswell, 2007). Themes and patterns related to changes in literacy instruction emerged.

To answer Research Question 3 (What does typical literacy instruction look like in the context of the first year of a longitudinal PD initiative?), we analyzed the field notes from the seven focal teachers' observations. We reduced these data using a coding system (Appendix F) adapted from Taylor and colleagues' (2005) research on effective literacy instruction. Using the HyperRESEARCH data analysis program, we coded five elements of literacy instruction: (a) management, (b) grouping, (c) instructional elements, (d) materials, and (e) teaching style. Three researchers (Seth, Allison, and Stephanie) coded observations collaboratively to ensure agreement and consistency.

To answer Research Question 4 (What are teachers' reflections on their own literacy instruction?), we analyzed the end-of-year questionnaire and focal teacher interviews. Pertinent to this research question, end-of-year questionnaires asked participants about their comfort in implementing guided reading (and why) and their frequency of implementation (and why). Responses to the question regarding comfort in implementing guided reading were reduced in the form of percentages of responses, which included four levels (very uncertain, uncertain, comfortable, and very uncomfortable). Responses to the question regarding frequency in implementing guided reading were likewise reduced based upon five levels (every day, a few days each week, every other week, once a month, and never). To analyze the focal teacher interviews, three researchers read the interview transcripts separately to identify segments of text related to the research question. Researchers identified patterns across the interviews regarding their perspectives of their literacy instruction.

To analyze the data for Research Question 5 (How do students perform on standardized tests of reading?), we analyzed scores from the reading subtest of the annual standardized assessment administered in grades 3-6. Following a pre-post model, we collected scores preceding and following the first year of the PD initiative. We used repeated-measures analysis of variance (ANOVAs) to determine the presence of statistically significant literacy growth across the school year at each grade level 3-6 based upon the students' proficiency level (Below Basic, Basic, Proficient, or Advanced). The proficiency levels from 2011 were used because approximately 70% of the students who took the 2010 test also took the test in 2011.

Findings

Research Question 1: What are Teachers and School Leaders' Perceptions of the PD?

Data from the four post-PD questionnaires demonstrated that teachers found the PD sessions helpful. Analysis revealed 257 coded responses regarding what was helpful and only 45 responses regarding what was least helpful. The responses showed that teachers valued: (a) the focus on the content of guided reading (21% of all "helpful" responses across the four PD sessions), (b) examples and models of instructional techniques (19%), (c) practical resources they could immediately use in their instruction (13%), (d) a focus on using centers/stations in literacy instruction (13%), (e) information about conducting running records (8%), and (f) collaborating with colleagues (6%). Regarding the least helpful aspects of the PD sessions, teachers noted that the information was not practical (18%); some of the resources were not helpful (9%); and a handful of teachers noted that the emphasis on running records was not beneficial (11%), typically noting that they were already familiar with taking running records.

Participant interviews also demonstrated positive perceptions of the PD initiative. In nine of the 12 interviews, the participants made positive comments about the initiative. For example:

- "The PDs about the workshops have been really, really helpful to me" (2nd grade teacher).
- "I think the PD's excellent. I think a lot of teachers benefitted from it" (5th grade teacher).
- "It was an excellent first year. I think we rolled it out in a logical manner" (school leader).

Participant interviews also corroborated the findings from the questionnaires. Participants noted that the models and practical resources were a particularly beneficial aspect of the PD initiative. For instance, a school leader recounted, "You said, 'Okay, now we are going to be the students and we want you to actually see what it feels like to model or do this stuff." A reading specialist stated the benefit of the fourth PD session with the make-and-take format: "It was hands on and looking at centers—what they can actually do and set up in their classroom."

Nonetheless, participants perceived weaknesses in the initiative as well. The 3rd grade focal teacher, based upon her conversations with teachers, reflected that an emphasis on behavior management was missing in the PD: "Everything comes down to the management…The behavior

needs to be more tied into the PD for our workshop…What's lately been happening is I've been seeing people start, gather resources, then they're like, 'Kids are too loud. I scrapped it.'" Several school leaders expressed the need for increased implementation and commitment. The principal noted, "We have a way to go as far as implementation school wide." The school's data manager explained: "I would have liked to have seen more accountability on teachers: 'Okay, if you are not doing guided reading, why are you not doing guided reading and how can we help you with guided reading?'" Both reading specialists explained that the initiative began strongly, but commitment to the project waned at the end of the year: "Towards the end of the year, we fell off because we got so busy with assessment and end-of-year assessment because our schedule filled up." Sustaining interest in a long term PD program is something that needs to be anticipated as a potential weakness a priori.

Research Question 2: What are Teachers' and School Leaders' Perceptions of Change in Literacy Instruction in Light of the PD Initiative?

All seven focal teachers noted in interviews that their instruction reflected the PD initiative. The depth of their description in this regard, however, varied. Focal teachers in grades 1-4 provided detailed explanations—and three of those teachers referenced the videos of their colleagues conducting guided reading in PD session 3 as a reason for their instructional decisions. For example, the 1st grade focal teacher noted that she specifically added more vocabulary instruction to her guided reading lessons and completed more running records during guided reading after the PD viewing of a video of her colleague conducting guided reading. The 2nd grade focal teacher described how watching the videos of her colleagues not only steered her to restructure how she completed guided reading but also led her to observe one of the teachers daily while her students were at specials, so she could see guided reading in action more frequently. The 3rd grade focal teacher explained that she took more running records after watching her colleague implement guided reading. The 4th grade focal teacher explained that she improved her guided reading instructional alignment with the general literacy curriculum. The remaining focal teachers (K, 5, and 6) did not explicate any details related to how their instruction reflected the PD initiative.

Similarly, school leaders almost unanimously noted that there was greater implementation of guided reading in the primary grades. Nonetheless, school leaders acknowledged that there was not widespread implementation and that dependence on the scripted reading program

persisted. For instance, a reading specialist described what she observed in classrooms: "Just the basic [scripted reading program]. You know, just trudging along with what we were doing—doing what you know." Similarly, the school's data specialist stated, "There was still a reliance on the basal readers…People know what it [guided reading] looks like, people know what it should sound like, now we need to bridge the gap into doing it with everybody."

Research Question 3: What Does Focal Teachers' Typical Literacy Instruction Look Like in the Context of a Longitudinal PD Initiative?

Focal teacher observations revealed many classroom management concerns. The researchers documented 24 disruptions and 23 occurrences of off-task behavior in seven observations. Researchers observed a variety of grouping structures. Individual work was observed six times, pairs once, small-group instruction eight times, and whole-class instruction nine times. In the observations, shared reading was observed twice, guided reading eight times, meaning-focused word work 19 times, spelling/phonics-focused word work nine times, read-alouds three times, independent reading seven times, authentic writing four times, and writing activities focused on mechanics or grammar four times. Teachers used authentic texts 10 times, more than any other type of material in the observed literacy instruction. Students used computers five times, completed worksheets four times, read a guided reading text on three occasions, and used the basal reader twice. Manipulative use was not observed. Two teaching styles dominated: literal teacher questioning and the use of positive feedback, both observed 18 times in the seven observations. Focal teachers also used telling 12 times and discussing 10 times as instructional methods.

Research Question 4: What are Teachers' Reflections on Their Own Literacy Instruction?

Teacher end-of-year questionnaires revealed that teachers felt comfortable implementing guided reading. Indeed, 90% of teachers reported that they felt "comfortable" or "very comfortable" running guided reading groups. Many teachers (17) offered reasons for their responses. Teachers explained: "The kids love it [guided reading] and it greatly improves reading ability," and "It [guided reading] has been taught several times in PD, so I am comfortable implementing this in the classroom" and "I have been working with small groups for several years. With the training that we have had at [the school], I feel comfortable running

guided reading groups." Teachers who reported feeling uncomfortable with guided reading indicated: "It's hard because the students are at the beginning stages of reading and often it does not apply to them" and "I have a larger class with many behaviors and sometimes it's impossible to run the small groups."

On the end-of-year questionnaires, teachers also reported varied frequency of guided reading implementation. Of the 30 participants who responded, 23% reported implementing guided reading daily, 43% a few days each week, 7% every other week, 7% monthly, and 20% never. Teachers consistently implementing guided reading reported their reasons for doing so: "Because it works for me" and "Because it is a best practice and helps my students achieve" and "Students respond and look forward to guided reading if it's not every day. They get bored if they do the same thing daily." Reasons for less frequent implementation included: "[I] try to keep [scripted reading program] routine, because kids are more used to it" and "It's hard" and "The more [my instructional assistant] is out of the room, the less I do guided reading" and "I did not have access to books that are on the level necessary to meet my students' needs. I have expressed this several times."

Primary grades focal teachers' perceived their students' reading achievement growing more than intermediate teachers. For instance, the kindergarten focal teacher stated that he saw, "Tremendous strides." In January the 1st grade teacher stated her students' literacy growth was, "Exceptional." She elaborated: "I had students at the beginning of the year who were reading at kindergarten level…we have moved. My lowest level is at a C level, which was at A at the beginning of the year…they're moving. They're progressing well." In February the 2nd grade teacher explained, "They're doing better. Slowly, we made a couple of gains as far as [purchased assessment] goals, and we see—I can see in the data that they're progressing, but it's a little bit slower than I want it to."

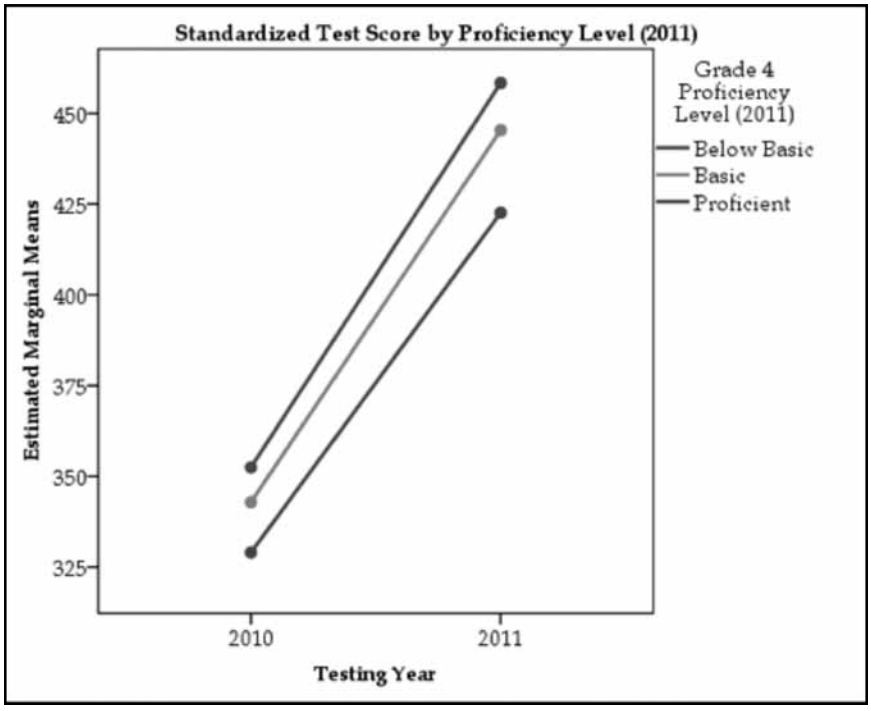
In March, the 3rd grade teacher commented, "I've seen growth. They've all grown at least one-half year, so that's good." She went on to describe growth in students' affective outlook towards reading: "I've seen a flourishing in reading. None of my students hate reading, which is, I find, really exciting. Not any of them are like, 'Oh, independent reading [rolling eyes].'" The 4th focal grade teacher described progress in strategy use. The 5th grade teacher explained that his "middle" students have demonstrated growth. However, he lamented that he has been unable to meet the needs of his advanced and struggling readers. The 6th grade teacher elaborated on students' lack of vocabulary and comprehension skills, but noted, "They are progressing."

Research Question 5: How Do Students Perform on Standardized Tests of Reading?

In this section, we report the results of students' literacy achievement by grade level. Fourth grade is the first level for which we have both the 2010 and 2011 scores. Both sets of standardized test scores were available for 76 of 102 students. There were no students classified in the *Advanced* category in 2011. A statistically significant improvement in reading test scores was found across all three groups ($F_{2,73} = 76.93$, $p < .001$), demonstrating overall differences between students in the Below Basic, Basic, and Proficient categories from 2010 to 2011. Post hoc tests showed no statistically significant differences between the proficiency groups, driven primarily by extreme differences in group membership sizes. Overall, students in each of the proficiency levels showed significant growth on the standardized reading test from 2010 to 2011. An interaction was noted between the three groups on the standardized test scores from 2010 to 2011 ($F_{2,73} = 4.47$, $p = .015$), suggesting that the growth for the students in the three proficiency-level groups, while similar, was not identical.

Figure 1

Students' Achievement from Grade 3 to Grade 4



For fifth-grade students, both sets of standardized test scores were available for 51 of 74 students. Four students were classified in the *Advanced* category in 2011. A statistically significant improvement was found across all four groups ($F_{3,47} = 10.01$, $p < .001$), showing overall growth among students in all four proficiency categories from 2010 to 2011. Post hoc tests showed no statistically significant differences between the groups, driven primarily by the extreme differences in group membership sizes. Overall, students in each of the proficiency levels showed significant growth on the standardized reading test from 2010 to 2011. No interaction was identified between the three groups on the standardized test scores from 2010 to 2011 ($F_{3,47} = 1.07, p > .05$), suggesting that the growth for the students in the three proficiency-level groups was similar. Students in the Basic, Proficient, and Advanced proficiency levels started at approximately the same level, and little separation was seen in growth trajectories between 2010 and 2011. Students in the Below Basic proficiency level showed the same degree of growth as measured by standardized test scores from 2010 to 2011, finishing about the same level below the other three groups in both years.

Figure 2

Students' Achievement from Grade 4 to Grade 5

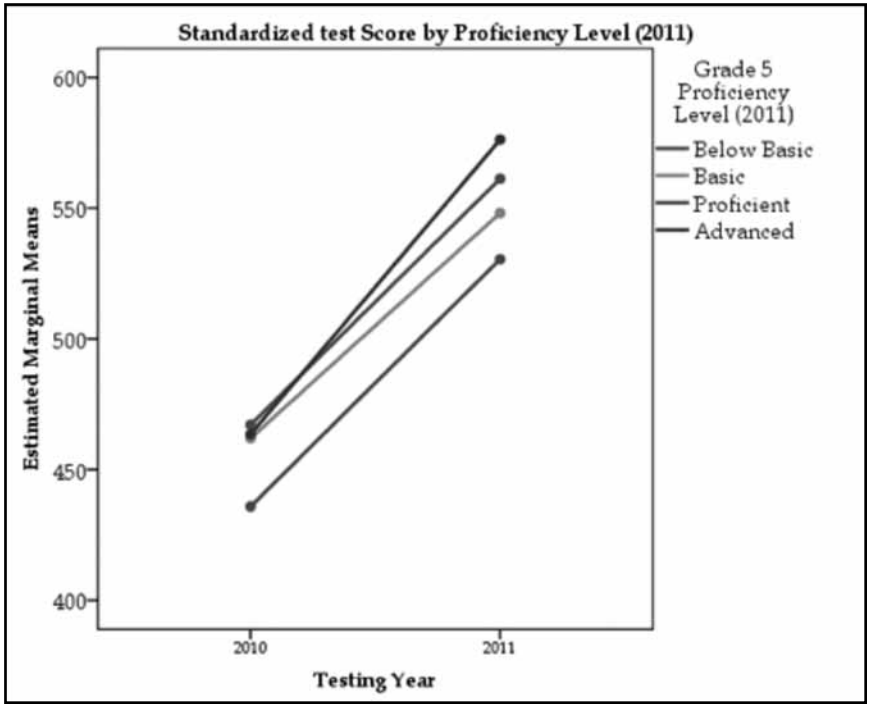
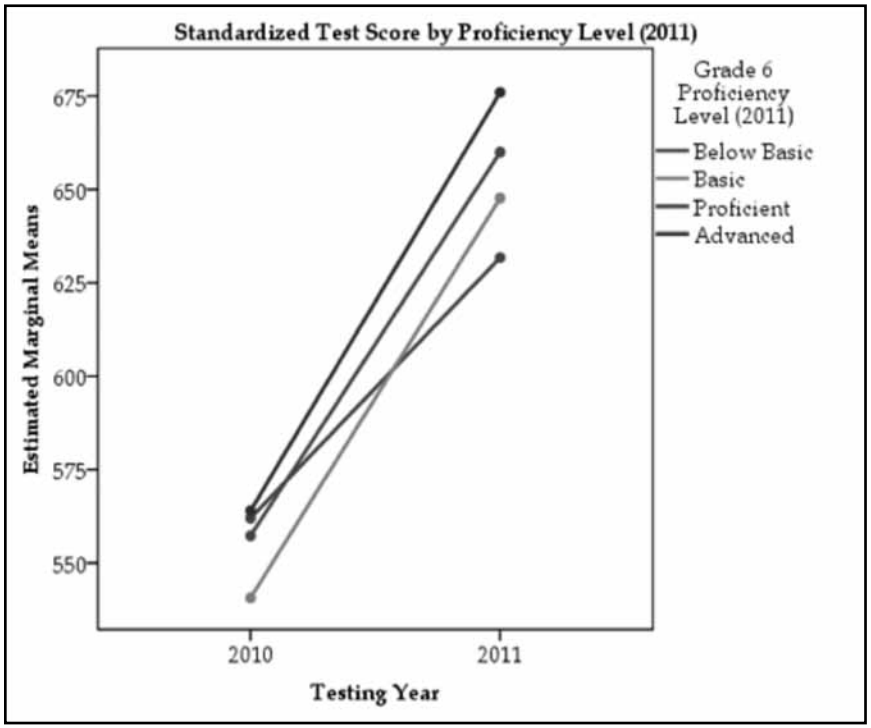


Figure 3

Students' Achievement from Grade 5 to Grade 6



Both sets of standardized test scores were available for 45 of 73 sixth-grade students. Only one student in 2011 was classified in the *Advanced* category. A statistically significant improvement was found across all four groups ($F_{3,41} = 7.56, p < .001$), showing overall differences among students in all four proficiency categories from 2010 to 2011. Post hoc tests showed no statistically significant differences between the groups, driven primarily by the extreme differences in group membership sizes. Overall, students in each of the proficiency levels showed significant growth on the standardized reading test from 2010 to 2011. An interaction was identified between the four groups on the standardized test scores from 2010 to 2011 ($F3,41 = 4.90, p = .005$), suggesting that the growth for the students in the four proficiency-level groups, while similar, was not identical.

Discussion

This article describes the beginning of a longitudinal, collaborative PD initiative that is based upon a school-university partnership in a high-poverty,

urban elementary school. A charter school administrator reached out to the first author in the summer of 2010 seeking assistance in meeting a critical pedagogical goal: to increase K-6 student reading achievement as a mere 28% of students scored at or above the proficient level prior to the initiative. Therefore, university personnel employed formative design methodology to facilitate meeting this goal by developing and implementing a sustained PD initiative to build school capacity in literacy instruction. In this first year, we found positive perceptions of the initiative as well as areas on which to focus moving forward. In addition, while only 29% of students scored at or above the proficient level, students in this school showed statistically significant gains on standardized assessments of literacy.

This research demonstrates the complexities of building a school-university partnership focused on increasing elementary reading achievement. This charter school serves a high-poverty, predominantly African American, elementary school student population whose literacy rates were far below a proficient level. This case study illustrates the inequities that African American urban students often experience (i.e. uncertified teachers and low-level literacy instruction) (NAEP, 2011). The type of instruction observed in the participants' classrooms and the low number of certified teachers aligns with previous assertions that minority students in urban schools have fewer high-quality teachers than their White suburban peers (Lankford et al., 2002; Parsons, Richey, Malloy, & Miller, 2013). It is critical for education researchers to find ways to close the achievement gap between White and minority students. The findings in this study extend current literature by identifying potential means to support teachers' practice in an urban community through a school-university partnership.

To date, little is known about how and what teachers learn from PD initiatives, particularly in the realm of literacy (Correnti, 2007; Fishman et al., 2003). Our findings indicate that teachers in this study began to grasp the theoretical underpinnings of effective literacy instruction (faster than anticipated, given the understanding that change in schools takes time) (Guskey, 2002; Taylor et al., 2005), but they still had questions about practical application. As our lens led us to predict, teachers expressed an appreciation for the PD initiative and requested resources to build their knowledge base. Moreover, many teachers acknowledged the importance of a balanced literacy framework (Cunningham & Allington, 2007). These findings speak to teachers' perceptions of the PD. As Fishman et al. (2003) and Desimone (2009) asserted, evaluations of PD must include assessments of teachers' perceptions, teachers' practice, and teacher and

student learning. The school-university partnership described in this study captured these components through questionnaires, interviews, classroom observations, and standardized achievement data. This case study highlights the potential interaction between PD and student achievement.

Educators, researchers, and policymakers presume that improved teaching leads to improvements in student learning, but there is not enough evidence to support this claim (Cusumano, Armstrong, Cohen, & Todd, 2006). The findings from this study indicate growth in student literacy achievement, more than expected given that we know improvements in instruction take time (Guskey, 2002). While these findings are encouraging, only 29% of students scored at or above the proficient level (and of those, only a handful reached the Advanced level). This finding tells all stakeholders that more growth is needed to help students succeed in their literacy development. Moreover, the demonstrated growth needs to be interpreted with caution because student assessment results were extremely low at the beginning of the study. Consequently, growth may be due to floor effects. Additionally, the comparatively small number of students in each grade level and unequal sample sizes across the four proficiency levels in each of the grades analyzed do not allow for meaningful comparisons between the proficiency levels. Finally, we recognize that our research design precludes us from drawing causal conclusions between the PD and student achievement. There are many factors that influence teachers' instruction and student learning, so we acknowledge this limitation of the study. Nevertheless, this study found an upward movement in students' performance on a standardized test of reading associated with the first year of our literacy PD initiative.

This initiative includes many of the principles of high-quality literacy PD described in the research literature. First, this PD initiative is ongoing. We worked with the school to design a longitudinal literacy PD plan that spans several years. We acknowledge that more intensive interaction would have been ideal. However, in Year 1 four PD sessions were as close as we could get. Second, our PD focus is well aligned with the school's learning goals for students. The emphasis on guided reading during the first year met the primary learning goal of increasing literacy achievement through differentiated instruction. Third, we perceived that the school had very strong leadership. The head of the school was in his second year and worked to create a professional atmosphere that promoted lifelong learning. Fourth, our PD focused on enhancing teachers' practice to increase student literacy achievement.

Two principles of effective literacy PD that were not overwhelmingly

evident in Year 1 of the project include: (a) using student assessment data to guide instruction and (b) collaboration. Accordingly, the school and university personnel are working to strengthen these aspects. For example, after Year 1, the school stopped using DIBELS and acquired assessment systems—PALS-K (Invernizzi, Swank, & Juel, 2007) and QRI-5 (Leslie & Caldwell, 2010)—that provide more comprehensive information regarding students' reading strengths and needs. Moreover, the plan for Year 3 of the initiative is to implement teacher study groups and to connect with families through the school's Parent Teacher Association. Our goals are to: (a) increase teacher learning through colleague collaboration, expanding the growing research base on teacher study groups (Gersten, Dimino, Jayanthi, Kim, & Santoro, 2010), and (b) strengthen family-school communication and relationships to support our literacy initiative.

Following the formative design, we are using what we learned in Year 1 to inform the future of this longitudinal initiative. We used teachers' input, school leaders' input, and our own observations to guide the ongoing PD. Teachers told us, and we saw, that they did not have assessment data that were detailed enough for them to group students for focused literacy instruction. Therefore, we worked with the school to obtain assessment materials that could provide fine-grained information regarding students' reading performance. Likewise, in Year 1 we learned that school specialists did not have the credentials for their positions. The three coaches were eager to support teachers and help them grow; however, they did not have advanced knowledge of effective literacy instruction or coaching practices. Therefore, in Year 2 we are focusing our efforts on enhancing the knowledge and practice of literacy coaches. We are conducting professional book clubs and discussions with the school leaders. In the Fall of Year 2, we will read *Classrooms That Work* (Cunningham & Allington, 2007) to increase understanding of what high-quality literacy instruction looks like. In the Spring semester, we will read *The Literacy Coaches' Handbook* (Walpole & McKenna, 2004) to increase the specialists' knowledge of effective coaching practices. In addition, in Year 1 we saw a need for PD on classroom management, so supporting this important aspect of instruction is also a priority for Year 2. In short, we are using what we gleaned through this work to inform our future work.

Taylor and her colleagues (2005) demonstrated that sustainable school improvement in literacy takes time, commitment, and hard work. Enhancing students' literacy performance is vital to their future success, and we are eager to continue the hard work necessary to support their growth.

References

Anders, P. L., Hoffman, J. V., & Duffy, G. G. (2000). Teaching teachers to teach reading: Paradigm shifts, persistent problems, and challenges. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. III, pp. 719-742). Mahwah, NJ: Erlbaum.

Au, K. H., Raphael, T. E., & Mooney, K. C. (2008). What we have learned about teacher education to improve literacy achievement in urban schools. In L. C. Wilkinson, L. M. Morrow, & V. Chou (Eds.), *Improving literacy achievement in urban schools: Critical elements in teacher preparation* (pp. 159-184). Newark, DE: International Reading Association.

Bean, R. M., & Morewood, A. L. (2011). Best practices in professional development for improving literacy instruction in schools. In L. M. Morrow, & L. Gambrell (Eds.), *Best practices for literacy instruction* (4th ed., pp. 455-478). New York, NY: Guilford.

Bradley, B. A., & Reinking, D. (2011). Revisiting the connection between research and practice using formative and design experiments. In N. K. Duke, & M. H. Mallette (Eds.), *Literacy research methodologies* (2nd ed., pp. 188-212). New York, NY: Guilford.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. Washington, D.C.: National Academy Press.

Bransford, J., Darling-Hammond, L., & LePage, P. (2005). Introduction. In L. Darling-Hammond, & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 1-39). San Francisco, CA: Jossey-Bass.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*(1), 32-42. doi: 10.3102/00131809X018001032

Correnti, R. (2007). An empirical investigation of professional development effects on literacy instruction using daily logs. *Educational Evaluation and Policy Analysis, 29,* 262-295.

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Cunningham, P. M., & Allington, R. L. (2007). *Classrooms that work: They can all read and write* (4th ed.). Boston, MA: Pearson.

Cusumano, D. L., Armstrong, K., Cohen, R., & Todd, M. (2006). Indirect impact: How early childhood educator training and coaching impacted the acquisition of literacy skills in preschool students. *Journal of Early Childhood Teacher Education, 27,* 363-377.

Desimone, L. M. (2009). Improving impact studies of professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181-199. doi:10.3102/0013189X08331140

Dillon, D. R., O'Brien, D. G., Sato, M., & Kelly, C. (2011). Professional development and teacher education for reading. In M. L. Kamil, P. D. Pearson, E. B. Moje, & P. P. Afflerbach (Eds.), *Handbook of reading research* (Vol. IV, pp. 629-660). New York, NY: Routledge.

Doubek, M. B., & Cooper, E. J. (2007). Closing the gap through professional development: Implications for reading research. *Reading Research Quarterly, 42,* 411-415.

Duffy, G. G. (2004). Teachers who improve reading achievement: What research says about what they do and how to develop them. In D. S. Strickland, & M. L. Kamil (Eds.), *Improving reading achievement through professional development* (3-22). Norwood, MA: Christopher-Gordon.

Fishman, B. J., Marx, R. W., Best, S., & Tal, R. T. (2003). Linking teacher and student learning to improve professional development in systemic reform. *Teaching and Teacher Education, 19,* 643-658. doi:10.1016/S0742-051X(03)00059-3

Fountas, I. C., & Pinnell, G. S. (1996). *Guided reading: Good first teaching for all children*. Portsmouth, NH: Heinemann.

Fullan, M. (2007). *The new meaning of educational change* (4th Ed.). New York, NY: Teachers College Press.

Gersten, R., Dimino, J., Jayanthi, M., Kim, J. S., & Santoro, L. E. (2010). Teacher study group: Impact of a professional development model on reading instruction and student outcomes in first grade classrooms. *American Education Research Journal, 47,* 694-739. doi:10.3102/0002831209361208

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, 8*(3), 381-391. doi:10.1080/13540600210000051_2

Hirsh, S. (2005). Professional development and closing the achievement gap. *Theory Into Practice, 44,* 38-44. doi:10.1207/s15430421tip4401_6

Invernizzi, M., Swank, L., & Juel, C. (2007). PALS-K: *Phonological Awareness Literacy Screening-Kindergarten, (6th ed.).* Charlottesville: University Printing Services.

Kennedy, E., & Shiel, G. (2010). Raising literacy levels with collaborative on-site professional development in an urban disadvantaged school. *The Reading Teacher, 63,* 372-383.

Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. *Educational Evaluation and Policy Analysis, 24,* 38-62. doi:10.3102/01623737024001037

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, United Kingdom: Cambridge University Press.

Leslie, L., & Caldwell, J. S. (2010). *Qualitative reading inventory-5*. Boston, MA: Pearson.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.

National Assessment of Educational Progress. (2011). *The nation's report card. NAEP 2009: The year in review.* (NCES 2011-471). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

No Child Left Behind Act of 2001 Pub L. no. 107-110. (2002). Accessed December 6, 2011 from http://www2.ed.gov/policy/elsec/leg/esea02/index.html

Parsons, S. A., Richey, L. N., Malloy, J. A., & Miller, S. D. (2013). Are we giving students the high-level literacy skills they need in the 21st century? *Reading in Virginia, 35,* 6-14.

Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher, 29*(1), 4-15.

Scott, S. E., Cortina, K. S., & Carlisle, J. A. (2012). Understanding coach-based professional development in Reading First: How do coaches spend their time and how do teachers perceive coaches' work? *Literacy Research and Instruction, 51,* 68-85. doi:10.1080/19388071.2011.569845

Stoll, L. (2010). Connecting learning communities: Capacity building for systemic change. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *Second international handbook of educational change* (pp. 469-484). Dordrecht, The Netherlands: Springer.

Taylor, B. M., Pearson, P. D., Peterson, D. S., & Rodriguez, M. C. (2005). The CEIRA school change framework: An evidence-based approach to professional development and school reading improvement. *Reading Research Quarterly, 40,* 40-69. doi:10.1598/RRQ.40.1.3

Taylor, B. M., Raphael, T. E., & Au, K. H. (2010). Reading and school reform. In M. L. Kamil, P. D. Pearson, E. B. Moje, & Afflerbach, P. P. (Eds.), *Handbook of reading research* (Vol. IV, pp. 594-628). New York, NY: Routledge.

Walpole, S., & McKenna, M. C. (2004). *The literacy coach's handbook: A guide to research-based practice*. New York, NY: Guilford.

Yin, R. K. (2009). *Case study research: Design and methods (4th ed.)*. Los Angeles, CA: Sage.

Appendix A

Post-Professional Development Teacher Questionnaire

1. What content or activities in today's professional development were most helpful?

2. What content or activities in today's professional development were least helpful?

3. Please list three things you learned today.

4. Please describe any changes you plan to make to your instruction based upon today's professional development.

5. Please describe any areas you would like to learn more about.

Appendix B

Key Informant Interview Protocol

Probe all responses as needed

1. Please tell us your thoughts regarding this year's literacy PD initiative.

2. Based on your time in classrooms, please describe any classroom-level changes in literacy instruction.

3. Based on your time in formal and informal observations and meetings, please describe any grade-level changes in literacy instruction.

4. What, in your opinion, has been the most effective aspect of the literacy PD initiative?

5. Do you feel that student assessment results reflect of the literacy PD initiative?

6. What, in your opinion, are the most important next steps in the literacy PD initiative?

Appendix C

Teacher Observation Protocol

Teacher:

Date:

Time:

Running field notes of literacy instruction
(direct instruction, format, grouping, texts, activities, etc.):

Appendix D

Post-Observation Interview With Teacher

1. How did today's literacy instruction go?

2. What changes would you make to today's literacy instruction and why?

3. Was today's literacy instruction informed by the school's professional development? If so, how?

4. Please describe your students' literacy progress.

5. What would help you better meet your students' needs in literacy?

6. Is there anything else you would like to tell us about your literacy instruction or about this professional development effort?

Appendix E

End-of-Year Questionnaire

1. What grade level did you teach? _____

2. How many years have you been teaching? _____

3. How many years have you been at [the school]? _____

4. What is your teacher preparation background?
   a. Graduate degree in education
   b. Bachelors degree in education
   c. [district] certification
   d. Other

5. How often did you typically implement guided reading?
   a. Every day
   b. A few days each week
   c. Every other week
   d. Once a month
   e. Never

Why?

6. How comfortable do you feel running guided reading groups?
   a. Very uncertain
   b. Uncertain
   c. Comfortable
   d. Very comfortable

Why?

7. How has guided reading affected your students' literacy learning?
   a. Greatly improved my students' learning
   b. Slightly improved my students' learning
   c. No change in my students' learning
   d. Hurt my students' learning

8. How often did you typically conduct running records?
   a. Every week
   b. Every two weeks
   c. Every month
   d. Each grading period
   e. Never

9. How comfortable do you feel conducting running records?
   a. Very uncertain
   b. Uncertain
   c. Comfortable
   d. Very comfortable

10. What was the effect of running records?
    a. Greatly informed my literacy instruction
    b. Somewhat informed my literacy instruction
    c. Did not inform my literacy instruction

11. How would you rate the effectiveness of your literacy instruction?
    a. Highly effective
    b. Effective
    c. Ineffective
    d. Highly ineffective

12. What is the role of guided reading in your literacy instruction?
    a. A central feature
    b. An important feature
    c. A minor feature
    d. A distracting feature

13. How would you rate your students' literacy growth this school year?
    a. Substantial growth (more than 1 grade level)
    b. Moderate growth (about 1 grade level)
    c. No growth

14. Please describe any changes you plan to make to your literacy instruction for next year.

Appendix F

Observation Coding Sheet

Code	Definition
Teaching Methods	**Frequency Coded**
Telling	Telling students information and/or lecturing to students
Discussing	An interactive and extended communication where views on a topic are exchanged
Teacher Questioning - Literal	Asks for facts or summary (right-wrong answers)
Teacher Questioning - Inferential	Asks for students to think about ideas not actually in the story. Does not have one correct answer
Reading aloud	Teacher reads aloud material
Testing	Teacher is giving a test or other formal assessment
Round robin	Calling on students to read orally
Reviewing	Going over a concept previously taught
Instructional Feedback - Positive	A response given to student to affirm or encourage
Instructional Feedback - Negative	A response given to student to correct or change behavior
Management	**Frequency Coded**
Transitions	A break in instruction between tasks
Off Task	Teachers or students observed as not engaged in classroom activities
Disruptions	An interruption in instruction (e.g., phone rings) or students off task to the point of teacher interference
Grouping structure	**Coded once per task**
Individual	Students are working on a task by themselves
Pair	Students are working on a task with a partner
Small Group	Students are working on tasks in groups of 3 or more
Whole Class	All students are working on the same task together

Code	Definition
Instructional elements	**Coded once per task**
Shared Reading	Teacher reads aloud a common text; students can participate in the reading
Guided Reading	Multiple copies of text are given to a small group of students and teacher supports students in reading the text
Word Work - Vocabulary	The meaning of words are discussed
Word Work – Spelling, Phonics	Letter, letter patterns, letter sounds, or words in isolation
Read aloud	Teacher reads aloud from text students cannot see. A distinct instructional element of the reading block and includes the reading of an authentic text.
Independent reading	Students read by themselves
Writing - authentic	Students are asked to write for a real purpose or audience
Writing - mechanics, grammar	Writing that focuses on skill work
Materials (used by students)	**Coded once per task**
Textbook	Basal Readers
Guided Reading book	Multiple copies of the same text at a specific reading level
Worksheet	Students asked to complete tasks on a precreated piece of paper
Computer	Students sent to work on computers
Authentic text	Texts that are not part of the basal series or textbook
Manipulatives	Objects used to reinforce the lesson objective that requires student interaction (e.g., flash cards, magnetic letters, etc.)

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Combining Print and Visual Information Via ePosters: Generating and Displaying Learning

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Finding ways to encourage secondary students to meet the requirements of the Common Core State Standards is a challenge to teachers and to teacher educators. This study draws on research with three populations of students: 11th graders in a history class at a San Diego area charter school where a majority are eligible for free lunch and most speak English as an additional language, 47 secondary teacher candidates at a Northern California teacher preparation institution, and 20 graduate students in a master-of-arts online program in California were also participants. All were asked to integrate technology into their learning. Secondary students explored history through ePosters (Glogster), secondary teacher candidates incorporated ePosters (Glogster or Prezi), and practicing teachers in a graduate program chose from several formats for their ePosters. Students in all three groups completed their projects successfully and indicated deeper learning as a result. Implications and affordances of various tools are provided.

> "Creating a Glog really made me read my articles lots of times so I could keep shrinking the information into just the big ideas. Havin' to show them through photos really makes ya' know if you've got the right ideas in the right order. It's fun! I had to keep checking everything out by reading more than one article to be sure. Then I had

> to select the best photos and show them in the best order so everyone could get the message with just a few words. Talkin' about it with Antonio [his partner] helped too." ~Malik, 11th Grade

This quote from an 11th grader, who usually performs at a very basic level, illustrates that when students are invited to use the new tools of technology and engage with others to discuss their ideas, they can be highly motivated to take part in learning tasks in ways that cause them to be creators as well as consumers of information. Students like Malik may adjust their reading to ensure they accurately comprehend the ideas they are about to share through a new medium. Malik's work calls into play the definitions and recommendations for 21st century literacies that have been published by prominent literacy organizations such as National Council of Teachers of English (NCTE, 2008) and International Reading Association (IRA, 2009). Their statements identify the need to bridge the traditional print literacies with the changing world of technology occurring daily for Malik and others in classrooms where they have opportunities to explore the world of technology as a major dimension of their everyday learning. Students like Malik are actualizing the following goals that NCTE (2008) suggests are important for later success outside of school.

- Developing proficiency with the tools of technology
- Building relationships with others to pose and solve problems collaboratively and cross-culturally
- Designing and sharing information for global communities to meet a variety of purposes
- Managing, analyzing and synthesizing multiple streams of simultaneous information
- Creating, critiquing, analyzing, and evaluating multi-media texts
- Attending to the ethical responsibilities required by these complex environments

These goals are well coordinated with the Common Core State Standards (CCSS, 2010) that require the integration of language arts and technology into all disciplinary areas. The CCSS requirements are propelling the recommendations into classrooms, despite the general lack of funding, increased accountability demands, and some general reluctance and/or fear to change the way we teach. Thus, the purpose of this article is to illustrate how using new literacies combined with traditional literacies can promote critical thinking and engagement in students at three different levels of education. Moreover, we wondered why learners from high school through graduate schools choose the tools they do when they have the opportunity to create a presentation for their peers.

Participants in this study were drawn from three populations which included 110 students in 11thth grade at a San Diego area charter school

where a majority are eligible for free lunch, and most speak English as an additional language. The two other groups, 47 secondary teacher candidates at a Northern California teacher preparation institution and 20 graduate students in a master-of-arts online program in California, were also participants. Work products, survey results (both quantitative and qualitative), and interviews informed the project.

Today's K-12 students are at home in the digital world and use a variety of social networking sites; however, they may only peripherally use interactive technologies in academic settings. As illustrated by Malik's comment, composing tasks that involve multiple media formats promote critical thinking about the inputs of learning tasks (reading, observation, listening to a lecture, and so on) in ways that working with just one format does not. Realizing the significant impact engagement with technologies has on its users, we decided to more deeply explore the dimensions of this relationship by investigating how digital tools have the potential to give equal footing to information shared through print and other visual or graphic information with two other groups having high stakes in the learning outcomes of K-12 students.

Realizing that the learning/technology experiences occurring for the students at Malik's high school were ones that other teachers might also embrace, we studied how secondary teacher candidates learn that digital and traditional literacy is integral to teaching their disciplinary areas, and how experienced teachers in graduate level programs compose and synthesize action research papers using electronic posters (or ePosters). Through a comparison of the experiences of these three groups, we forge a pedagogical connection for teachers that supports their realization of the value of maintaining a technological pace with their students and of the instructional power of choosing tools that provide students with opportunities to create multimodal compositions as part of their content and literacy learning.

Multimodal Compositions using Images and Text

The authors subscribe to a broad definition of literacy that includes the uses of digital expressions that are complex, dynamic, and socio-culturally situated (Gee, 2008; Street, 2001). We argue that meaning and knowledge are derived through complex social, and cultural instantiations of language. In the realm of digital literacies, these instantiations may be seen in a variety of different modalities such as text, music, video, drawing, photography, or any combination of these (Kress, 2010). In our work, we seek to bridge the social literacies of our students (at all levels) with more academic uses of digital literacies. In addition to being consumers of various technologies, we wished to teach our students to become producers of multimodal compositions (Kress, 2010).

Expanding the Notion of Literacy

The notion of literacy has slowly grown to include more than just basic

proficiency with written text; literacy now encompasses other types of texts and sign systems (cf. Lankshear & Knobel, 2003) including the visual (e.g., illustrations, photographs) as well as the linguistic (that is, words). In this article, we think of literacy as a series of pathways, bridges, and intersections. Communication based on language is a pathway, and communication based on graphics or photographs is another pathway. However, from a pedagogical standpoint, we can think of visual and linguistic information in terms of the bridges to knowledge that are formed when the two are used in tandem, side-by-side if you will, as long as there is a clear bridge or connection between the information pathways. Equally important, these pathways are places where linguistic and visual information are not parallel, but they intersect with the words informing the visual and vice versa.

Visual images may be interpreted just as linguistic texts can be (Burmark, 2008). However, the manner in which viewers understand and interpret an image may be substantively different than their approaches to linguistic text. From these differences, the possibility of cognitive dissonance and greater resonance simultaneously arise. Students can be taught to read visual images, just as they are taught to read words (Rakes, 1999). These are skills particularly important as electronic media increase the amount of graphic information students encounter and create. Photographs, artwork, maps, and graphs have been paired with texts based on words. In the age of information, anyone with a computer has the capacity to create and alter images that may accompany the texts they write (and the other way around, too). The ever-present PowerPoint® with visuals from clip art and image archives is just one ready example.

Knowledge typically is not separated from the perceptual mode that originally informed the knowledge (e.g., Sadoski & Paivio, 2004, 2007). What one learns with words tends to be coded in memory with words. What is coded visually (sometimes referred to as nonverbal) tends to be coded as a function of the nonverbal information. This is one reason that learning activities sometimes call for students to transform knowledge from one genre to another (e.g., turn a short story into a poem) or from one format to another (e.g., recreate a poem as a graphic novel). Students learn to attend to important attributes of the original source of information in order to recreate or re-present it in a new genre or format. In essence, when words and images or other visual information create bridges and intersections between pathways, learning tends to increase.

In the following ePoster examples of the integration of technology and media into disciplinary learning, we illustrate at three different educational levels how the deepening of understanding and increase in knowledge of content can be achieved. We encourage teachers at all levels to think about how such technology and disciplinary integration may be achieved in their varying educational contexts. Figure 1 indicates the categories and affordances of the ePoster tools that were used in the study.

Figure 1. ePoster Tools and Features.

Tool	URL	Description/Features
Voicethread	http://voicethread.com/	A collaborative web-based application and social networking tool where individuals may upload many kinds of media to present and/or respond to in 5 ways using voice (with a mic or telephone), text, audio file, or video (via a webcam).
Prezi	http://prezi.com/	A presentation tool that helps you organize and present ideas with art, media, and interconnectivity. Prezi provides non-linear and zooming movement in presentations and can be used for collaboration in meetings.
PowerPoint	http://office.microsoft.com/en-us/powerpoint/	A seemingly ubiquitous tool that is almost universally viewable and has the capability of integrating sound, images and text. PowerPoint slides can be uploaded to file-sharing sites (e.g. www.authorstream.com and Slideshare.net). Newer versions also permit PowerPoints to be converted into narrated video which can be uploaded to sites such as Youtube.
Glogster	http://www.glogster.com/	A social and visualizing network presentation tool that allows the expression of ideas by connecting and "mashing up" your favorite media, photo, and video sites to express your ideas. Using Glogster tools, you can rotate, resize, add effects and animations. Glogster is the site name, and Glog is the poster tool created there.
Vuvox	http://www.vuvox.com/ Note: Vuvox has gone offline and is no longer available	An online tool, billed as a production and sharing service, that permits you to mix, create, and blend personal media video, photos and music into rich personal expressions that can be shared with a network of "friends." Using Vuvox you can personalize and customize it, as well as blogging in an "always on" space where you "mix up" backgrounds, colors, and textures that create your story.

Case 1: High School Students Understand History through ePosters

Working with their teachers, a group of high school juniors enrolled in a history class were studying the age of American Imperialism during the late 1800s and early 1900s. For this project, students used Glogster (http://glogster.com), a free online poster authoring tool to create and share information related to this topic. The resulting ePoster is called a "Glog." Producing a Glog motivated students to create new ways to express their newly acquired historical knowledge. They worked in pairs to discuss and negotiate the best way to present their information in the Glog. During this process, students read and re-read their notes and then synthesized the information to accommodate the Glog presentation format. Returning to the text often deepened their understanding since they were creating new ways to share the content in different media important to meeting Common Core standards (Calkins, Ehrenworth, & Lehman, 2012). Incorporating Glogs also allowed students to acquire a deeper understanding of the print material, a primary reason Mr. Vaca chose Glogster, and an opportunity to demonstrate mastery of the content through a mashup of pictures, graphics, audio and student-authored text, conveyed through their Glogs. In each case, students presented their ePosters to their peers that offered opportunities for interaction with those peers, either in a face-to-face format or via an online discussion board.

To begin this project, students had to read and make notes on one aspect of American Imperialism during the late 1800s and early 1900s. Working in pairs, they had a choice of topics to research. After compiling an initial base of information, students then re-presented their information in an online Glog. They were required to use at least four images and present a synthesis of the main points of their research with text they wrote. It was during this process that students returned multiple times to the text so that they could validate that the information they were conveying was indeed accurate. Finally, students presented their Glogs (see examples in Figure 2) to their classmates.

Figure 2A

America's involvement in the Panama Canal:
http://www.glogster.com/glog/6l4ck59cs49r1jhq3ko92a0

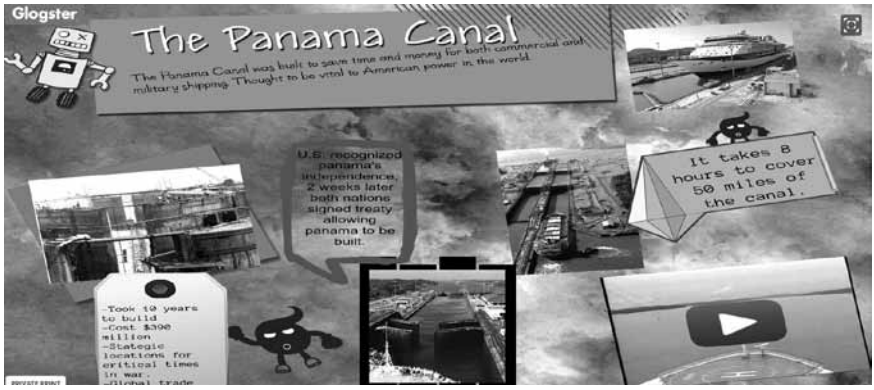


Figure 2B

America's involvement in annexing Hawaii:
http://www.glogster.com/bettykathy/myglogster

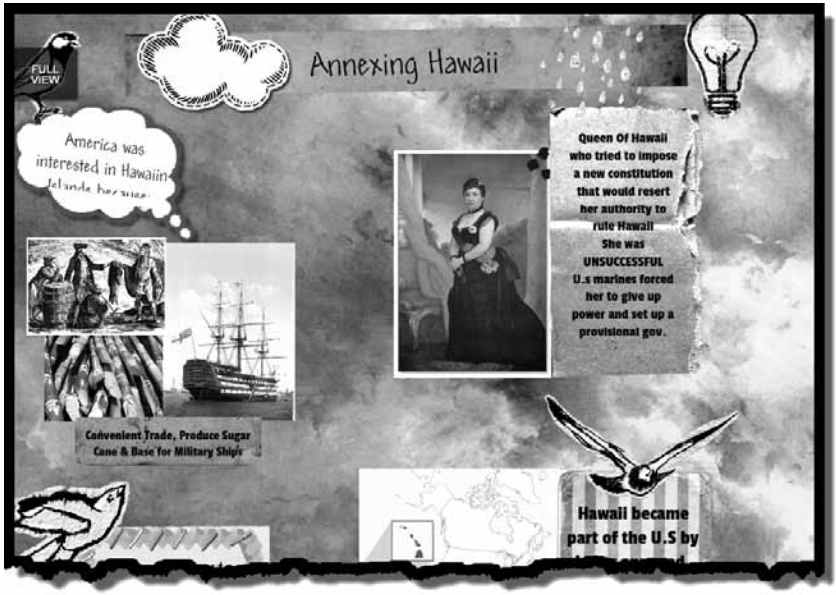
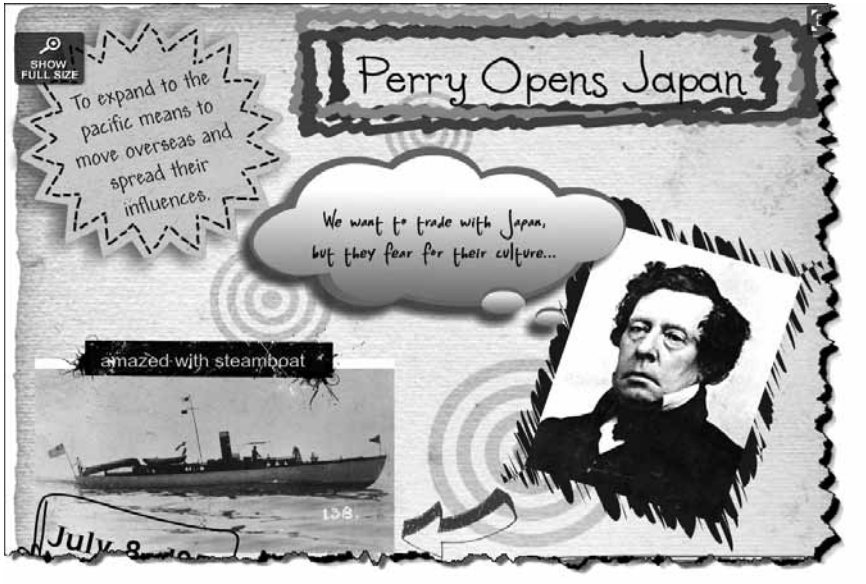


Figure 2C

Opening up trade with Japan:
http://www.glogster.com/stabec/perry-opens-japan/g-6l4cb32d7nm7a185vg3ima0



Incorporating varied media was associated with motivated learning (Grisham & Smetana, 2013). Students took ownership of their learning when given the freedom to present their knowledge through text and visuals. They became excited about the historical topic because they were able to creatively select images and compose the words needed to express their content knowledge. This type of engagement may have deepened their learning because in order to prepare for their presentations they pushed themselves to return to the text multiple times to synthesize their notes into a media presentation. As Jovan noted, "I read so many things so many times so I could get it just right. It was kinda fun though." Their exposure to the content material increased as they looked at the content from different perspectives. The vast majority of the students earned perfect scores on the written exam covering this period of United States history. This indicated that they had learned not just what they were presenting, but also the information being presented by their peers. Through engagement with Glogster, they had indeed become producers as well as recipients of information.

Case 2: Preservice Secondary Teacher-Candidates in Content Literacy

With our understanding of how high school students might make use of Glogster to combine visual literacies with text as a means of learning and expressing that learning, we wanted to engage secondary teacher candidates who sometimes resist using literacy strategies as a means of promoting content (e.g., math, science, physical education) learning. In other research, we have found that even relatively young teacher candidates may be fearful of using technology (Grisham & Wolsey, 2012) in their future classrooms.

Teaching content literacy to secondary teacher candidates is a challenge for literacy researchers and teacher educators, as preservice teachers coming from all disciplines take one required literacy methods course, which they often perceive as tangential, at best, to the content of their subject areas (Fisher & Ivey, 2005; O'Brien, Stewart, & Moje, 1995). In the summer of 2011, 47 secondary teacher candidates wrote a lesson plan using a literacy strategy relevant to their content and made an ePoster (they could choose either Glogs or Prezi) that supplemented, extended, or became a part of their lesson plans. First, the course instructor created a Glog and a Prezi, showing both to the students as models and giving them their choice of which tool to use.

Students chose the relevant literacy strategy from the course textbook or from further research on the Internet. They were required to use appropriate standards in their lesson plans for both their disciplinary area and the level at which they taught. They were also required to include at least one multimodal element in the ePoster (audio, video, links, etc.) Candidates were introduced

to the CCSS through a collaborative Webquest (http://literacybeat.com/) and asked to consider those requirements as they planned their lessons. One class session took place in the computer lab where students worked in discipline-alike groups to explore the tools. We observed that teacher candidates collaborated and supported each other through this process as we have reported elsewhere (Grisham & Wolsey, 2012).

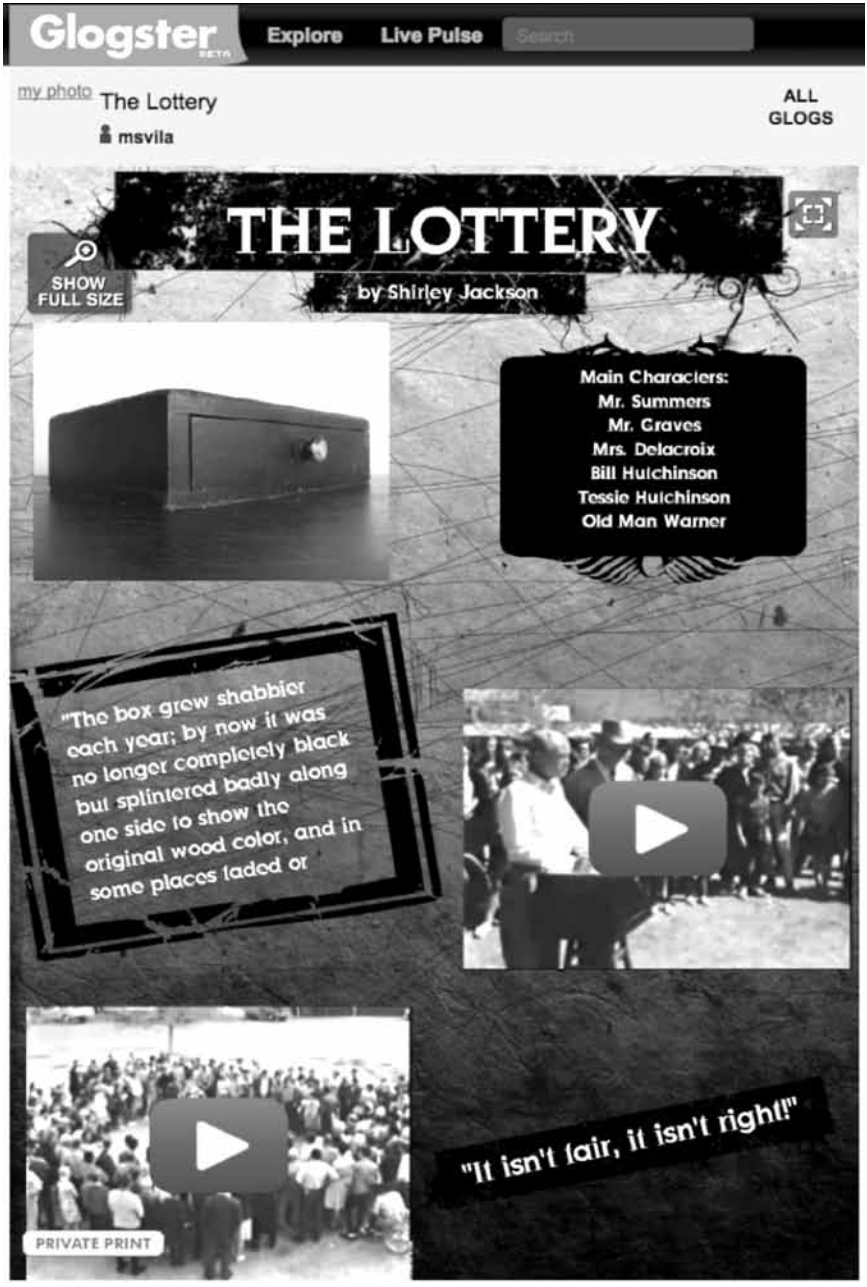
Secondary teacher candidates posted their lesson plans and ePosters to a course discussion board and responded to each other's work online. Similar to the high school students' reactions (see above), teacher candidates reported that they valued the opportunity to see how their own work compared with that of their colleagues as well as appreciating different approaches to the ePosters they viewed. Candidates stated that they felt more comfortable with using technology as they reflected on their lessons. Finally, they noted that they liked the multimodal nature of the task and cited ways they would use these with their own students when they were teaching (see Grisham & Smetana, 2011).

The majority of secondary teacher candidates appreciated the assignment. A post-course questionnaire found that on a Likert-type scale (with 1 being a very useful assignment and 5 being not at all useful), the average for both sections of the course was 1.7 and, in their final reflections, participants recognized the possibilities for their grades 6-12 students to use media creatively. We noted that Prezis was chosen less often as many teacher candidates found the Glogster site easier to use (13 Prezis of 47 ePosters). Glogs may seem easier to do but proved harder to access through linking. The Prezi format can be less linear, and thus the format seemed unfamiliar to the candidates.

In their reflections and in discussion board posts, many candidates commented on the relevance of using technology in their content areas. They analyzed each other's work and a number of them praised their colleagues for the ePosters they had done. In one example, a teacher candidate in art created a Glog (http://ccabral.edu.glogster.com/zoom-glog/) where *Zoom* (Banyai, 1995), a children's picture book that begins with a large and colorful picture of something then slowly zooms out in each successive page, was presented. This teacher candidate used *Zoom* to help her high school art students understand perspective. Her colleague stated, "The video you attached to your Glog, alongside the differentiation between the first and third person narrative, is truly an efficient way of supplementing classroom learning in regards to this specific lesson plan. I will be sure to look further into this *Zoom* book you have mentioned and utilized so effortlessly in an academic manner. In regards to using this book in correspondence with the California English/Language-Arts Standards, *Zoom* seems to be extremely intriguing, very useful, and incredibly original. Great lesson plan!"

Figure 3 shows a Glog created to teach *The Lottery* (Jackson, 1948) in high school English.

Figure 3. Screen Capture of Glog for *The Lottery*



The essence of Prezis is movement. To view a representative Prezi in science (Natural Selection) go to: http://prezi.com/8j-c23-v51di/natural-selection/?auth_key=055d05a07219031407690808931 41a180838b574. A larger sampling of the ePosters may be found in the Literacy Beat blog: http://literacybeat.com/.

At the end of the summer, teacher candidates were asked their reactions to the ePoster assignment and, while there were four students (of the 47) who disliked the project, the rest were complimentary, with comments similar to the mathematics candidate who noted, "I found that I am enjoying thinking about how I might use the Glogs in my middle school classroom to showcase student learning."

Integrating new technologies across the disciplines defines new roles for teachers and students. Combining the visual and the textual in ePosters was associated with both effective learning of literacy strategies to be used in secondary classrooms and also brought home to candidates that effective disciplinary teaching requires consideration of literacy learning—the levels present in the PK-12 students, the desired learning outcomes, the appropriate differentiation of lessons, and the necessity of engaging students with technology.

Case 3: Graduate Level Practicing Teachers

In a graduate level course, experienced teachers were asked to create an ePoster session as a way of organizing and planning their action research based on clinical work they did with a tutee who struggled in some way with literacy tasks. Using threaded discussion tools (e.g., Grisham & Wolsey, 2006; Lapp & Wolsey, 2009), practicing teachers explored each others' research posters. The ePosters were linked in the discussion forum, and teachers then strolled, virtually, through the posters, stopping to ask questions or share details in the discussion forum as they went, just as they might in a face-to-face poster session for graduate students or at a conference. Because these were experienced practicing teachers pursuing master's degrees, we believed they would be able to bring their experience to bear in using digital tools amplify their understanding of action research and how to organize a written report of such a project.

In case I, high school students used Glogster, and in case II, preservice teachers could choose between Prezi and Glogster. With practicing teachers in case III, we added two additional tools to the choices. In addition to Prezi and Glogster, they could also select from Vuvox or Voicethread (see Figure 1 above). To learn more about their experiences with ePosters, we created a survey, reviewed the ePosters, and analyzed their comments with each other on the discussion boards.

Survey Results

These practicing teachers, enrolled in graduate study, were surveyed regarding their perceptions of the ePoster activity. Participants included 20 practicing teachers in a graduate level course in 2011. Their ages varied as seen in Table 1, below and they had an average of 7.35 years of teaching experience, and taught at various grade levels. There were 14 elementary teachers, 1 preschool teacher, and 5 secondary level teachers.

Table 1. Participant Demographics for Case 3 (N=20)

	20-29 years	30-39 years	40-49 years	50-59 years
Teachers' Ages	7	5	6	2

As we noted, practicing teachers were given their choice of four different ePoster tools: Glogs, Prezi, Voicethread and VuVox. No teacher chose the last two tools in our sample, but 8 chose to make Glogs and 12 chose to use Prezis. Later, we examine why this might have been so. None had ever used the tool they selected before. They were asked to tell us how easy or difficult it was to learn and use the tool. Their responses were made using a 5-point Likert scale from 1-5, ranging from 1 as "easy" to 5 as "hard," as shown in Table 2 (below).

Table 2: Ease of Use

1—Easy	2—Fairly Easy	3—Neither Easy nor Difficult	4—Moderately Difficult	5—Difficult
4 teachers	7 teachers	7 teachers	2 teachers	0 teachers

In the survey we asked students to share their experiences of creating an ePoster for the first time. One practicing teacher noted the overall tenor of these responses, "It was a little tricky to figure out at first, but once I got the hang of it, it became pretty easy to navigate through and create."

We also asked these teachers why they had selected a specific tool for their ePosters. Their comments typically indicated that they previewed the various sites, and then chose based on their perceptions of ease of use or the look of the completed presentations or models that were provided to them. One teacher wrote, "I selected Glogster/the Glog because I enjoyed the artistic aspect and the physical layout of ideas. It had also been extremely difficult for me to make the video in my previous class because I have no experience with video at all. I liked that I could include

something [the self-created video of her work with a tutee] on the Glog that I worked so hard on."

Responses (N=20) were evenly split between those who chose the tool they did because it was relatively easy to use or provided useful tutorials (n=10) and those who chose their tool because it was visually appealing or different in some way from traditional presentation tools (n=10). Some respondents provided more than one reason for choosing a specific tool. One respondent also noted that the selection was "cheapest," a curious reason because all tools offered free options. Three respondents noted that they chose their tool because it was the first of the models provided or the one others in their group had selected.

Most of the practicing teachers found the assignment useful for planning and organizing their action research papers, but a few used it as a summary or checklist for the completion of their action research papers. One noted, "Really helpful in planning out my thoughts. I thought it was a really progressive way to show thoughts in a more real way, not in a linear fashion. We don't think in linear terms; we think in layers and links, so it was useful to show that through the Prezi." Another told us, "It was very useful because it caused me to think about the report in its entirety."

Early-grade (mainly kindergarten through grade 2) elementary teachers reported that they could use ePosters to present information to their young students, while teachers at upper elementary and secondary grades thought about using the ePosters across several content areas, including having their 4-12 students compose using these new tools. One practicing teacher added, "I'm going to use it to display my work for an interview at a very tech-savvy school. I hope to blow them away with thinking outside of the PowerPoint box!"

The practicing teachers reported benefitting from observing examples of the media (Glogster, etc.) that were created by high school students. In this way, they became familiar with the capabilities of the media (for example, embedding a YouTube video). Graduate students often dread research courses because they are uncertain of how to pose questions to get started or to continue a study. Through the ePosters, these practicing teachers saw that their research questions shared attributes with those of their colleagues, and they learned that the methods they used in their research were appropriate.

Discussion

Our analysis of the three projects explored above indicates that the integration of appropriate technology into educational experiences was associated with deep learning and deep engagement with content at all three levels. The CCSS (2010) call for additional emphasis in the content/disciplinary areas, the incorporation of technology, and the integration of the language arts. Students in high school, secondary teacher candidates, and practicing teachers in graduate school valued the notion of putting ideas together using both visuals and linguistic texts and were successful

in their learning of both content and new technology tools for presenting their learning.

All three groups appreciated the opportunity to see how their own work compared with that of their colleagues and began to think of themselves as authoritative researchers as they commented on the work of their peers. This was as evident at the high school level as it was at the graduate school level where teachers were actually conducting original research. In the opening vignette, Malik addresses this feeling of competence in reducing the volume of information to the manageable level using the technology and in collaboration with Antonio (his partner).

Students in high school, secondary preservice teacher candidates, and practicing teachers in graduate school valued the notion of putting ideas together using both visuals and linguistic texts. In all three groups, participants found that the multimodal nature of the task (Anastopoulou, Baber, & Sharples, n.d., p. 1) improved their understanding of their own research and that of their classmates.

The value of pairing visual information as an organizing framework has significant learning implications. It has long been accepted that learning which is provided using different learning modalities (for example, reading text and then writing about it or making a presentation of it) assists students to construct knowledge more extensively for themselves. "Close reading", as called for by the CCSS, is required for such construction of information and is based on the use of prior knowledge of language, the topic, and reading skills, analytic-critical thinking skills, and problem-solving abilities to construct new knowledge. Text (or linguistic information) when paired with visuals such as images or video can have a synergistic effect (e.g. Marzano, Pickering, & Pollock, 2001). At the same time, visuals and text are not always parallel pathways, and the places where they intersect with each other at crossroads may create dissonance that leads to learning (or confusion) or resonance with existing learning as pathways that are not necessarily parallel lead to the learning outcomes and critical understandings. Further, our experience suggests that images offer evocative appeal that differs in substantive ways from that found with some types of text.

It should also be noted that both K-12 and university classrooms today are some of the most diverse in history. The strategic use of technology can also provide multiple representations of ideas that are meaningful to a wider representation of individuals, including those who may have learning difficulties and/or physical challenges. Universal Design for Learning (UDL) (CAST, 2012) illustrates how the learning needs of mainstreamed students and/or students with physical handicaps can be met through technology use. Translation software, closed captioning, and text-to-speech features can make the learning more accessible to all.

Implications

In some cases, teachers selected only from the first two choices of

several possibilities because they were unfamiliar with all the venues. As a result, they explored the first two options suggested in the list provided to them. Mr. Vaca selected the Glog for his high school students because it emphasized visual media that reinforced learning through reading and listening done in class. We speculate that they could follow the same pattern of selecting from unfamiliar technologies by exploring one or two then deciding. Thus, too many choices from among many unfamiliar options may tend to privilege the venues that are at the top of a list of choices when the choices are presented in list format. The same may be fairly said of the models provided: when a model favoring one or two venues is provided, the students at any level (high school, preservice teachers, practicing teachers) may select the venue that is modeled for them. The relative affordances, the actual or perceived properties, of the four tools we used are arrayed in Figure 4. Those marked as "collaborative" feature tools that allow users to share creation of an ePoster or presentation with a group.

Figure 4. Comparison of the four ePoster Tools

ePoster Tool	Modality emphasized	Strengths	Limitations	Estimated Ease for 1st-time User
Glogster	• Visual • Also auditory	• Educator version • Integrates image, video, audio, webcam • Drawing tool	• Student accounts are not easily shared by multiple teachers.	Easy
Prezi	• Visual including video embedding.	• Collaborative features • Free Educator License • Non-linear	• Does not support native audio	Medium
Voicethread	• Linguistic • Visual • Auditory	• Free version • Easy to edit audio • Supports multiple media types • Collaborative	• Free version limits number of projects	Medium
Vuvox	• Visual	• Free account available • Create galleries and collages	• Audio options are limited.	Easy

What did we learn about ePosters as a multimodal tool? First, we discovered that teachers and teacher educators can use ePosters to strengthen content literacy instruction (such as getting content-area teacher candidates to consider how literacy, traditional and technological, can enhance content area learning) or provoke new ways of thinking about historical events. Similarly, we discovered that teachers and teacher educators can use ePosters as a means of helping high school students, teachers-to-be, and teachers-in-practice to organize and clarify their thinking about complex tasks and improve reflection about their instructional approaches. Finally, we wondered what makes an ePoster the right choice as an instructional tool. Because images, other graphics, and video often pair nicely with text to promote thinking about content and organizational aspects of content, we discovered the seemless integration of all these elements in the ePoster format.

References

Anastopoulou, V., Baber, C., & Sharples, M. (n.d.). Multimedia and multimodal systems: commonalities and differences. Retrieved from http://www.syros.aegean.gr/users/manast/Pubs/Pub_conf/C03/C03.pdf

Banyai, I. (1995). *Zoom*. New York, NY: Penguin.

Burmark, L. (2008). Visual literacy: What you get is what you see. In D. Fisher & N. Frey (Eds.), *Teaching visual literacy: Using comic books, graphic novels, anime, cartoons, and more to develop comprehension and thinking skills* (pp. 5-25), Thousand Oaks, CA: Corwin Press.

Calkins, L., Ehrenworth, M., & Lehman, C. (2012). *Pathways to the common core: Accelerating achievement*. Portsmouth, NH: Heinemann.

CAST. (2012). About UDL: What is universal design for learning. Retrieved from http://www.cast.org/udl/

Fisher, D., & Ivey, G. (2005). Literacy and languages as learning in content-area classes: A departure from "Every teacher a teacher of reading." *Action in Teacher Education, 27*(2), 3-11.

Gee, J. P. (2008). *Social linguistics and literacies: Ideology in discourses*. New York, NY: Routledge.

Grisham, D. L., & Smetana, L. (2014). Multimodal composition for teacher candidates: Models for K-12 classroom writing instruction. In R. Ferdig & K. Pytash (Eds.), *Exploring technology for writing and writing instruction,* (pp. 228-247). New York, NY: IGI Global.

Grisham, D. L., & Smetana, L. (2011). Generative technology for teacher educators. *Journal of Reading Education, 36* (3), 12-18.

Grisham, D. L., & Wolsey, T. D. (2012). Creating podcasts: 21st Century literacy tools for secondary teacher candidates. *Journal of School Connections,* 4, 1, 53-80.

Grisham, D. L., & Wolsey, T. D. (2006). Recentering the middle school classroom as a vibrant learning community: Students, literacy and technology intersect. *Journal of Adolescent and Adult Literacy,* 49, 648-660. doi: 10.1598/JAAL.49.8.2

Kress, G. (2010). Multimodality: *A social semiotic approach to contemporary communication*. New York, NY: Routledge.

Lankshear, C., & Knobel, M. (2003). New literacies: *Changing knowledge and classroom learning*. Maidenhead, Berkshire, UK: Open University Press.

Lapp, D., Grant, M., & Johnson, K. (2012) Language frames support talking, writing, and reading about complex science topics. Engage-teacher to teacher. Newark, DE: International Reading Association. Retrieved from http://www.reading.org/general/Publications/blog/engage/engage-single-post/engage/2012/01/10/teaching-tips-language-frames-support-literacy-in-science

Marzano, R. J., Pickering, D. J., Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

National Council of Teachers of English (NCTE), (2008).21st Century Curriculum and Assessment Framework. Retrieved from: http://www.ncte.org/positions/statements/21stcentframework

O'Brien, D. G., Stewart, R. A., & Moje, E. (1995). Why content literacy is difficult to infuse intothe secondary school: Complexities of curriculum, pedagogy, and school culture. *Reading Research Quarterly, 30,* 442-463.

Rakes, G. C. (1999). Teaching visual literacy in a multimedia age. *TechTrends, 43*(4), 14–18.

Sadoksi, M., & Paivio, A. (2004). A dual coding theoretical model of reading. In R.B. Ruddell, & N. Unrau (Eds.), *Theoretical models and processes of reading* (5th ed., pp. 1329-1362). Newark, DE: International Reading Association.

Sadoski, M., & Paivio, A. (2007). Toward a unified theory of reading. *Scientific Studies of Reading, 11,* 337-356.

Street, B. V. (2001). *Literacy and development: Ethnographic perspectives*. New York, NY: Routledge.

Wolsey, T. D., & Lapp, D. (2009). Discussion-based approaches for the secondary classroom. In K. Woods & B. Blanton (Eds.) *Promoting literacy with adolescent learners: Research-based instruction* (pp. 368-391). New York, NY: Guilford Press.

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"I'm The Leader": Third-Graders' Meaning-Making and Social Interactions during Informational Text Reading

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As more students begin to engage with informational text in the classroom, it's important to consider how children learn about and from informational text in interaction with their peers. This case study considers the ways in which a group of three third-grade students interact with digital and print-based informational texts – and with each other - while engaging in an inquiry-based project on the solar system. An analysis of these interactions generated three themes: (1) Students employed a range of strategies, such as orienting to the text, attending to accuracy, gesturing, and paraphrasing, to make meaning of the texts in collaboration with their peers; (2) Students engaged in print-based and online informational text in similar ways, and in ways that were text-centric; and (3) The interpersonal dynamics of the groups appeared to be strongly associated with how students engaged with the texts and project. These findings suggest that children engage with both informational text and with each other in complex interactions, and that teachers may want to consider how they can scaffold students' reading and their interactions in ways that are supportive but not overly constraining.

Prior to entering the classroom, many children are likely to encounter a range of informational texts such as grocery lists, newspapers, information books, and instruction manuals. For instance, Smith (2000) found that 90% of the texts adults encounter outside of school are informational in nature. Recently, researchers have also noted that the informational texts students negotiate as they progress through the grades not only increase in

quantity, but can also differ in form and structure (Gill, 2010; Moss, 2008; Wolfenbarger & Sipe, 2007; Yopp & Yopp, 2012). As students' transactions with informational texts continue to become more varied and complex, it stands to reason that readers must learn how to negotiate the demands of diverse informational texts so as to develop proficiency within them. And, as teachers move towards the integration of informational texts in their classrooms and design instructional contexts that support their use, it is important to document those practices carefully—particularly the ways young children take up and learn about informational texts in the company of their peers. These kinds of pedagogical and curricular understandings are particularly relevant and necessary given the growing emphasis on and integration of information texts as prescribed by Common Core State Standards (CCSS).

Contextualized within a larger study that examined three different classrooms across an academic year (Maloch & Zapata, 2011), we feature here the analysis of one group of third graders as they collaborated to read across informational texts, including online and print-based sources. Dyson and Genishi (2005) argue that in attending closely to particular cases, such as the one examined here, researchers might "gain insight into some of the factors that shape, and the processes through which people interpret or make meaningful" their experiences and learning (p. 3). Our analysis was guided by the question: How do students work together to comprehend informational texts? In the case of these three students, our analysis generated an intersection of textual and interpersonal themes.

Literature Review

Informational Texts in the Classroom

In this research, we understand informational texts as Duke (2003) does—texts written with "the primary purpose of conveying information about the natural and social world ... and [having] particular text features to accomplish this purpose" (p. 14). For many young readers, who are forever intrigued by the world around them, informational texts can inspire critical questions and hypotheses. Maloch and Zapata (2012), for instance, point to the wonder and awe well-selected informational trade books can elicit from young readers. Similarly, Donovan and Smolkin (2002) suggest that the genre, content and visual features of informational texts can enhance and encourage students' interest in science; moreover, Caswell and Duke (1998) note that informational texts can propel overall literacy learning as children become personally invested in the literature and content. Investigations illustrating the value and benefits of developing students'

access to and knowledge about informational texts (Pappas, 1991; Purcell-Gates, Duke, & Martineau, 2007) make clear that integrating informational texts into primary classrooms is an important practice.

Although researchers have documented a shortage of informational texts in early primary classrooms (Duke, 2000), there are indications that these findings are in some ways changing (Jeong, Gaffney, & Choi, 2010; Maloch, 2008; Moss, 2008). The numbers of informational texts in primary classrooms are growing slowly, and our understandings of how teachers teach and students learn from and about informational texts continue to develop as a result of intervention and case study research (Bradley & Donovan, 2010; Gregg & Sekeres, 2006; Maloch, 2008; Purcell-Gates, Duke, & Martineau, 2007; Williams, Hall, Lauer, Stafford, DeSisto, & deCani, 2005). However, investigations examining the work of young children reading from diverse informational text formats are still limited (Coiro, 2012). As Yopp and Yopp (2012) argue, "We must be attentive to not only the number, but also the breadth of the informational texts to which we expose children" (p. 484). Thus, we suggest that learning more about how students negotiate the structural features and content of all informational text forms may help researchers and teachers to better understand students' transactions with this evolving literary genre.

Demands of Diverse Informational Forms and Structures

Although informational texts have always been visually appealing, informational picture books have mined the allure and the benefits of their visual features to convey content and attract readers. Photographs, maps, diagrams, and other graphic devices appear on the covers, endpapers, copyright pages, and title pages, as well as in tables of contents and end matter such as glossaries and endnotes (Gill, 2009). Young readers of informational picture books now encounter varied design layouts across two page spreads that invite readers to begin reading at different points on the page instead of reading linearly from left to right.

In addition to trade books and other printed informational materials, the Internet has also become a central source of information for young readers in their classrooms (Parsad, Jones, & Greene, 2005). Like readers of informational picture books, young consumers of online information require distinctive skills, strategies, and dispositions to fully extract information and learning potential (Castek, Leu, Coiro, Gort, Henry, & Lima, 2007). Citing the Rand Reading Study Group (2002), Castek et al. noted that "… accessing the Internet makes large demands on individuals' literacy skills; in some cases, this new technology requires readers to have novel literacy skills, and little is known about how to analyze or teach

those skills" (p. 4). Clearly, more research is needed to better understand how young children manage the challenges of reading and gathering information on the Internet (Coiro, 2012).

Classrooms, Collaboration, and Informational Texts

Recent case study research provides interpretive portraits of the ways teachers are integrating informational texts into their classrooms. One avenue for the integration of these texts is through classroom-based inquiry units (Maloch & Zapata, 2011, 2012; Wells, 2001). In inquiry-based learning, young readers engage with informational texts to answer their own questions or learn more about a shared topic. During classroom inquiry, students may work alone or with their peers as they engage with informational texts. For an assortment of reasons, including issues of access and varying readability levels of informational texts (Palmer & Stewart, 2003), as well as beliefs about the value of collaborative work, teachers may intentionally structure students' research time to allow for collaborative work among the students.

The analysis we present in this paper takes as its focus this kind of collaborative work. Research suggests that peer collaboration affords opportunities for students to work together to construct shared knowledge. As they engage with one another, particularly around texts, they have occasions to participate actively and opportunities to learn from one another. And, in the best of these conversations, students push one another's thinking beyond what they might have done on their own (e.g., Almasi, 1995; Mercer, 1995). Yet, work in peer-based groups has not been without its problems. Without thoughtful structures and teacher oversight, peer groups can sometimes feature conflicts and unproductive talk (Maloch, 2002; Mercer, 2000). Lewis (1997), for example, noted the ways the social dynamics of the larger classroom context were re-created inside of small group discussions leading to the marginalization of particular students.

Given the research that suggests peer collaboration has both potential and reasons for caution, along with the fact that research on young children working together around informational texts is limited (Coiro, 2012), we argue that investigating how students work together to understand informational texts is warranted. Further, drawing from sociocultural theory (Vygotsky, 1978), it seems plausible that one way children learn to navigate informational texts may be from opportunities to engage in task oriented, collaborative inquiries in which they can hypothesize and sort out meanings together. For these reasons, we chose to look closely at how one group of third graders collaborated to read online and print-based

informational texts in the activity of a classroom inquiry unit.

In our analysis, we used a sociocultural stance (Mercer, 2000; Vygotsky, 1978; Wertsch, 1991) which views learning as a culturally sensitive and interactive process, and assumes that learning occurs as a matter of apprenticeship into valued practices, rather than as an accumulation of skills and strategies (Lave & Wenger, 1991). Our analytic attention, therefore, was drawn to not just the individual student but to the activity itself, which included the students, written texts, and dialogue that occurred as a part of that activity.

Method

This interpretive study, drawn from a yearlong examination of the uses of informational texts inside three classrooms, examines data collected over a period of six weeks during one third-grade classroom inquiry unit on the solar system. We focus here on a group of students representative of the diversity within the classrooms and the school (located in south central United States). SeEun (Asian-American), Caroline (White), and Liam (Latino) typified a range of academic interests, but they worked together, reading and gathering information for the purpose of their collaborative inquiry.

Ms. Carter, the participating teacher, described SeEun as a gifted student with a drive to do well in school. Her motivation to succeed academically typically resulted in strong grades. On the isolated occasion when she was not satisfied with her scores, SeEun requested extra credit to raise her grade. SeEun moved to the United States from Korea when she was in pre-school as both of her parents had enrolled in the local university. SeEun brought unique experiences and talents to the classroom, including fluency in English and Korean, transnational travel, and an affinity for musical instruments like the piano and violin. Her facility with the computer, how to navigate the web, and and how to handle the mouse suggested much previous experience with reading online.

SeEun identified as an avid reader and writer. It would be typical to see her at her desk, reading a realistic fiction chapter book. She loved fantasy and, like Caroline, it was always difficult to draw her attention away from her independent reading, which Ms. Carter described as being a 5th+ grade level. Given her reading fluency and comprehension, SeEun was often redirected towards more challenging books rather than her preferred familiar reads. According to her teacher, she enjoyed book club and the opportunities to share her responses to her reading with her peers.

Ms. Carter described Caroline as a very compassionate young girl who cared deeply for her teachers, friends, and family. Caroline was always the first to console another student if he/she was not feeling well, was not

having a good day, or was hurt on the playground. She volunteered to be a helper for Ms. Carter and was often the first student to greet her in the mornings. Based on our observations of Caroline in class, we would also describe her as playful and deeply curious.

Caroline also demonstrated distinct reading preferences and interests and a deep love of reading. In class, Caroline frequently had a hard time putting books away once silent reading and book club reading groups were over. Ms. Carter explained during her interviews that she would hate to pull Caroline away from a book knowing she was so immersed in the literature. Caroline did very well in school and conveyed a strong appreciation for learning. Caroline performed as an advanced reader and sought to read books beyond her independent reading level. Her mother clearly supported Caroline's learning at home and often sent Caroline's teacher late night emails on how she could better support Caroline in school. Although it sometimes appeared as if Caroline were distracted during classroom discussions, our observations of Caroline revealed that she was indeed listening carefully to her partners by adding to the conversation and looking at her partners when she felt she had something important or entertaining to say.

Liam expressed an affinity for sports and outdoors and was usually the first and the last on the playground. He belonged to a very large, extended family. His sisters, cousins, aunts, and mother attended, actively participated, served on staff or taught at his school. His family expressed great pride in Liam as one of the youngest and brightest members of their family. Ms. Carter described Liam as a very caring and social young boy. He loved being friends with everyone in the school and often gravitated towards older students out on the playground. At times, he struggled focusing and completing his schoolwork, which also interfered with developing a love for reading. By the end of the year, however, he discovered that he loved biographies of famous athletes. He loved to read about other athletes and how they became great athletes.

Ms. Carter explained that by the end of the year, Liam had developed an array of reading strategies, which helped him read independently at a "third grade" level. To further support Liam, Ms. Carter often grouped him with more focused students in order to help him sustain his success as a reader. Above all, Liam loved to work at the computer. Ms. Carter explained that reading on the computer was far more interesting to Liam than opening a book. As the dutiful student, Liam was determined to locate and record the information required of him both in the picture books and online. Liam's fidelity to the task of identifying and recording facts about Saturn made for an entertaining and rich context for our analysis.

We purposefully selected this group of students for two reasons. First,

we were able to document multiple episodes of their research together, through video, audio, and field notes. These episodes included times they worked with trade books and times they worked on the Internet. Second, our early observations suggested that this group's interpersonal dynamics seemed to be playing a role in their work with the texts. Although that was not a pervasive theme across all of the data, their work together offered us a "telling case" of the complexity of what happens (or what may happen) when you place young children around texts in this kind of inquiry unit.

The local community surrounding the school can be described as urban ethnically and economically diverse. For example, many of the homes in a five block radius have been identified as historical landmarks, yet just a few streets over is the International Housing for the local university as well as a Salvation Army shelter. An additional two miles over is the "East Side" of town, an area typically thought of as serving lower socio-economic families. Yet two miles in the other direction one would find loft housing and million dollar homes. Because the school zone cut though the heart of the city in this way, students from many backgrounds attended the school. It was not uncommon for a classroom to have 3-4 different heritage languages, children without homes, or children living in downtown high rises. The diversity of the lives and resources within each classroom made the activity of learning and collaboration an interesting one. The participating classroom was reflective of the diversity of the school. Ms.Carter's classroom class size ranged from 18-22 across the year.

At the time of this study, Ms. Carter, was completing her fourth year as a teacher. Her pre-service teacher preparation and three years as a teacher had all taken place at the same elementary school. Ms. Carter was well-liked by her colleagues for her caring ways and for her dedication to her profession. Ms. Carter voluntarily sought opportunities for professional development and learning. In addition to teaching, Ms. Carter was committed to her life as a long distance runner. It was not uncommon for Ms. Carter to dismiss her children at 3:30, complete a 10-mile run, and then return to her classroom to finish preparing for the next day.

Ms. Carter was selected for participation because our interactions with her suggested enthusiasm for informational texts and collaborative inquiry in her classroom. Her principal and our faculty colleagues (who had placed interns in her classroom) also recommended her as exemplary. In terms of classroom context, Ms. Carter met the cultural, linguistic, and economic diversity within her classroom with respect and interest. She made time daily for students to share news from home during classroom meetings and found ways to personally acknowledge their unique assets with individual conferences and other informal exchanges. In terms of instruction, Ms. Carter relied on readers' and writers' workshop, supplemented by guided

reading groups and whole group read-alouds, for her language arts instruction. For content areas, she organized her instruction by units. One of those units is the focus for this paper.

Classroom Context

As context for the students' work described in this paper, we describe here the classroom inquiry unit in which the students were engaged. Ms. Carter spent the first two weeks of the classroom inquiry study conducting teacher read-alouds and discussions, as she worked to establish shared knowledge with her students about the solar system and demonstrate note taking and research techniques. Next, students were invited to become experts on planets in order to publish travel brochures (shared at a third-grade-wide "travel convention") for their assigned planets. For this research, the students worked in groups of two or three, assigned by Ms. Carter based on their preferences in terms of planets. They were required to research their planet using three different data sources: books, Internet sites, and United Streaming videos. To support or scaffold students' research, the teacher provided a note-taking guide that students were to complete, formatted to collect information from each of these sources. In the notes packet, a two page spread was dedicated to each data source, each holding several columns with questions (e.g., What are the physical characteristics of your planet?"; "Explain the myths and legends associated with your planet"). The questions were the same across each data source.

Data Collection

For the larger study (Maloch & Zapata, 2011, 2012), data collection included observations in each of the classrooms two to four days a week on average, documenting (through video/audio records and photos) students' work with informational trade books, Internet articles, and web-based video (i.e., United Streaming) centered on their focus planet. Data sources used for the present analysis were drawn from the larger data corpus and included the following data from these three focal students: videotaped interactions during whole group lessons and in small group interactions with and around informational texts (8 hours of video data), observational field notes (16 hours of field notes), students' note-taking packets, the texts/sources used by students, and the students' travel brochures.

Data Analysis

Data analysis for the larger study was inductive (Strauss & Corbin, 1990), occurred across multiple phases, and culminated in the generation of the themes. These overarching themes are written about elsewhere (Maloch & Zapata, 2011, 2012). To conduct analysis of our focal students, we first

transcribed all instances from our data in which this group of three students were engaged in research. Next, we compiled all other data from this group, including their note-taking packets, travel brochures (the final product), and the texts they made use of during their research.

This compilation of data allowed us to analyze the focal students' interactions with texts by examining them *across* data sources. We analyzed the students' interactions with text in relation to the actual text they consulted, the videotape footage of their interaction, the notes they recorded for that interaction, and the ways the recorded information showed up in the final product. To analyze this group's work together, our analysis proceeded by first examining the students' textual work (i.e., sense-making strategies, navigation) and then examining the students' interpersonal work. Clearly, these two domains intersected. However, moving through our analysis in this way helped us turn our minds towards each of these aspects of the students' talk and work with text.

To be explicit, our study was conducted using a naturalistic approach in which we observed the integration of informational texts that was already occurring. We did not intervene or structure the students' interactions in any way. When students began working on their research, we observed and videotaped as much as we were able, but we were unable to document all of their work with informational texts. Therefore, a limitation of this analysis is that we do not have video documentation of every session in which the students in this group worked during this unit. Second, we have limited access to what the students were examining on screen. To address these limitations, we focused our analysis on how these students worked together across different types of text (including online texts) rather than trying to pinpoint particular findings about online reading comprehension or text navigation.

Findings

To address our overarching question of how students worked together to comprehend informational texts, it is important to note that we viewed students' work with one another and work with texts not just as a set of behaviors, but as social practices. The practices they engaged in with and around texts seemed to be associated with the contexts in which they occurred as well as the experiences students brought with them to the present moment (Maloch & Zapata, 2012). For this analysis, we selected several episodes of this group's collaborative work with informational texts. During the inquiry unit in focus for this study, Caroline, SeEun, and Liam collaborated to grow their learning about Saturn. Our analysis was guided by this question, *How do students work together to comprehend*

informational texts? and resulted in three themes:

a) Students engaged in a range of meaning-making behaviors as they worked together around informational texts including orienting to the text, attending to accuracy, gesturing, and paraphrasing in order to make meaning of the texts in collaboration with their peers.

b) Students' approaches to online informational texts bore a remarkable resemblance to their work with traditional, print-based informational books.

c) The interpersonal dynamics of the group, particularly the controlling leadership of one student, was associated with the degree of access and control experienced by the other students.

Meaning-Making Behaviors

Across both informational online texts and trade books, these three students engaged in behaviors directed towards their sense-making, or comprehending, of the texts. For example, as they encountered each new text, they spent a few seconds or minutes getting to know the site or text, as we see in the example below from their work with a page from www.kidsastronomy.com/saturn/moons.htm.

SeEun and Caroline are seated at the computer, looking at the screen together. For about one minute, they study the top part of the page. Caroline comments on the planets listed on the left bar of the screen,

Figure 1: SeEun and Caroline reviewing a website

points at the Saturn box, and says, "Let's do Saturn." SeEun reads through the first paragraph on the page, while Caroline looks at the surrounding content, commenting on some of the links (e.g., history.com). SeEun begins to scroll down (Field notes, 2/11).

We came to call this behavior of perusing the site before reading, one that we observed across students in all three classrooms, *orienting to text*. Below, SeEun engaged in the same kind of behavior as she opened the trade book, *Eleven Planets* by David Aguilar (2008).

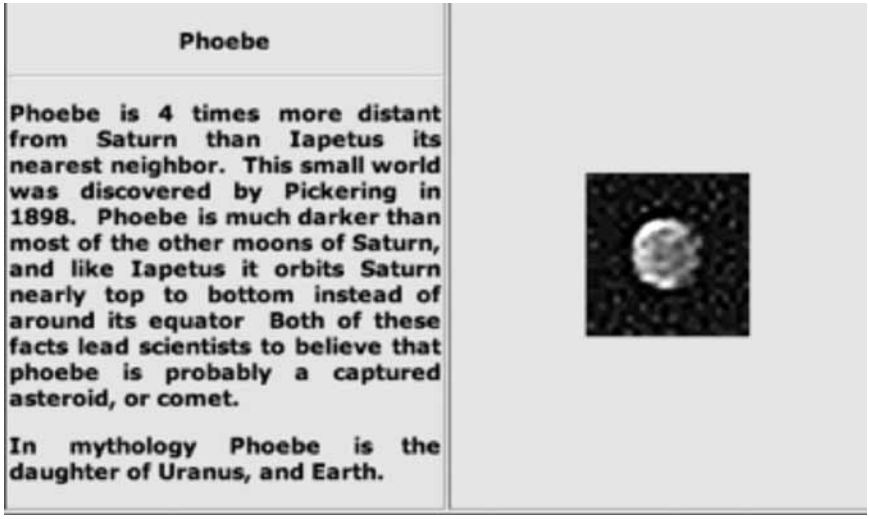
SeEun opens to the page on Earth, studies it for a moment, then flips back to Mercury, then Venus, then back to earth, then quickly flips the pages until she gets to the page on Saturn (Field notes, 2/23).

In this behavior, students took time to *orient* to the text before they started reading. They studied the layout of the page or flipped through the book seemingly to get a sense of the book or text as a whole.

Another meaning-making behavior that we observed was the use of *paraphrasing*. In the following excerpt, SeEun and Caroline were reading short blurbs about Saturn's moons, and they had just started to read about the moon called Phoebe.

Caroline points to the screen to follow along with the text and begins reading aloud. When, she finishes, she looks at SeEun and they talk about the passage, with some paraphrasing about Phoebe being the daughter of Uranus (Field notes, 2/17).

Figure 2: Screenshot of website viewed by SeEun and Caroline.



This behavior surfaced in almost every grouping we observed in this classroom. In fact, this strategy was recommended and repeatedly modeled by their teacher who called it: Read, Cover, Retell. In her modeling and explanation about this strategy, Ms. Carter encouraged students to stop periodically as they were reading, cover up the passage/paragraph, and retell what they had just read. This paraphrasing strategy, as seen above, showed up across the data of students working together with informational texts.

Following the above excerpt, Caroline and SeEun continued reading about moons, and came upon a moon named Iapetus. In doing so, Caroline engaged in another meaning-making behavior evident in our data, *gesturing*. As they read about the moon orbiting top to bottom, Caroline used her hands to mimic the orbit of the moon around the planet. In our data, we saw gesturing as a way of making meaning in at least two ways: (a) to orient their partners (mainly through pointing) to a shared point of reference, and (b) as its being used in the above excerpt, a way of representing or working through their understanding of something they read. Gesturing seemed to be a generative act for students' collaborative inquiry as they went back and forth between reading information texts and talk. Siegel (1995) might call this an act of transmediation wherein students used their bodies to render ideas read online.

Another meaning-making behavior we observed in this group, and in others, was *attention to the accuracy* of the information through attention to the copyright date and cross-checking information with other resources. In this next excerpt, the students are reading from Seymour Simon's *Saturn* (1985). As the excerpt begins, Liam has just started reading.

> Liam reads the first sentence in the book. When he reads "more than twenty [moons] have been discovered," SeEun breaks in saying,
> SeEun: Wait, what? (She flips back to the copyright page) 1985, guys.
> Liam: Oh man! (throwing his pencil down (sort of in jest)).
> Caroline: 85. Wait, go back.
> SeEun: That's 24 years ago
> Liam: I have shirts older than that.
> Caroline: (Pointing to page) More than 25 (book says 20) have been discovered. Well, we know that's not true, so maybe we//
> SeEun: (taps Liam, then points to the text) Read.
> Liam: But this is not a good book (banging his pencil on the book)
> Caroline: Well, we haven't filled anything out from this book, have we?
> Liam: Yeah we did

> Caroline: What did we fill out?
> Liam: We filled out 890 miles.
> SeEun: (starts reading from her notes packet) . . . made mostly of gasses
> Caroline: Well, that's probably true, it's mostly made out of gasses. We've read that in other books. It's okay. I think we think//
> SeEun: Let's just finish this book.
> Caroline: Yeah, let's just finish it. We started it. Let's finish it.

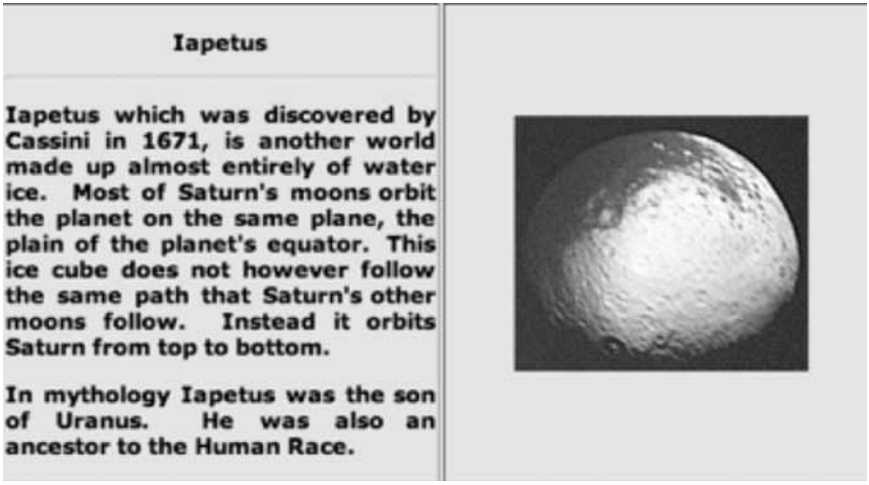
In this excerpt, disparities between information provided in this text (specifically, the number of moons discovered) and their other resources prompted SeEun to check the copyright date. Upon discovering the 1985 date, the three immediately became concerned. Despite the consensus of concern, Caroline and SeEun seemed convinced that they should go ahead and finish the book. After checking the information they had already recorded from this text against information they had already gathered, they decided to continue on with this text partly because the information wasn't too far off from what they'd seen before and partly because "they started it". It seemed clear, though, that they had learned a lesson about checking the dates of a resource. Later, during this same work session, the students began checking the copyright dates before they selected the book (e.g., "This one is 1983, is that okay?"). Importantly, this is not a meaning-making strategy we observed in students' work with digital texts.

Approaching Online and Print Text

In terms of students' navigation of print and electronic texts, we observed both a tendency towards linear movement through the text and a preference for linguistic text (over multimodal text, such as visual displays or photographs). Although students' approaches to informational texts were influenced by format and type of text they were reading, their work with online texts bore a remarkable resemblance to their work with books. For example, in the following example, SeEun and Caroline had just discovered a webpage that detailed Saturn's moons.

> SeEun begins scrolling down, pointing at each blurb about the moons. Caroline says, "The one we know about is Titan" as SeEun is slowly scrolling. Then, SeEun scrolls quickly down the page. Caroline tells her to slow down ("But you're going so fast, I can't even see them!"), but SeEun tells her that at the bottom of the page there is an index they can use. When they get to the bottom of the page, there is no index, and they start looking at the moons starting from the bottom and working their way up (Field notes, 2/17).

Figure 3: Screenshot of website selected by SeEun and Caroline



As can be seen above, SeEun and Caroline selected an online text that included both text and photos. The text was arranged in short paragraphs on the left with the photo on the right. Interestingly, the paragraph and photo (see screen shot above) look like they could be a two-page spread from a book.

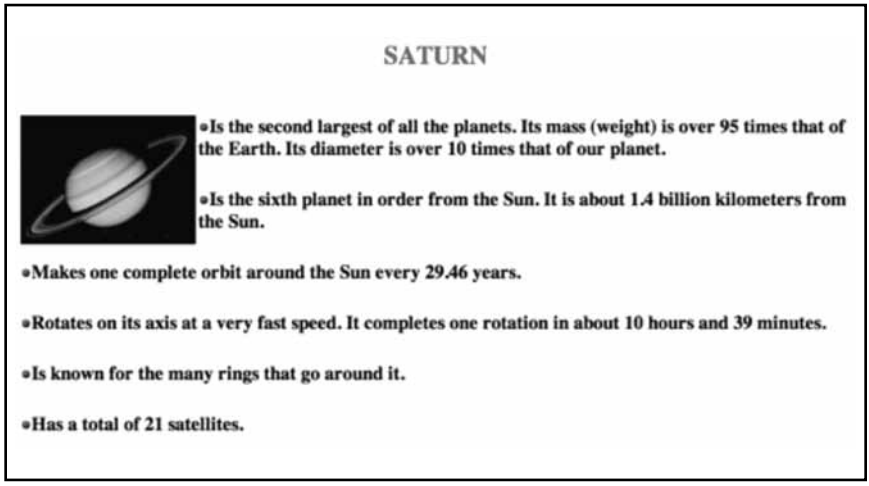
Three things are evident in this transcript that we find relevant for our research question. One, the students seem to be focused almost entirely on the linguistic information provided in the text. They do not spend much time looking at the photos, although Caroline's comment, "But you're going so fast, I can't even see them!," could be interpreted as her attempt to attend to the photos (from her use of *them* in describing the page). Once they arrived at the bottom of the page, they began moving from paragraph to paragraph. Although they were now moving from the bottom to the top of the screen, they were continuing to approach the task in a very linear way.

Two, it's clear from the above excerpt that SeEun was applying her previous experiences with books to this reading task. She was searching for an index and she was searching for it in what would be the "right" place if this were a book, at the end. Finally, in this excerpt we also see the ways that varying intentions and approaches are negotiated between these two students. Caroline seemed intent on starting at the top and reading to the bottom, while SeEun seemed to be searching for an index. When Caroline asserted her "slow down" remark, SeEun made explicit her own intentions. Because she controlled the mouse, her intentions won the day.

We discuss these interpersonal dynamics more in the next section.

Relatedly, as students explored web-based texts, they seemed drawn to texts dominated by linguistic printed information (words), texts that were neither hyperlinked nor interactive in nature. The websites they evaluated as "good" were sites that featured primarily text and very little else. Below, we have inserted another example of a website they selected. As it came up, SeEun remarked, "Oh this is pretty good" (Field notes, 2/18).

Figure 4: Screenshot of website selected by SeEun and Caroline.



This page, one that was similar to the other websites they visited, was primarily filled with linguistic information—in this case, a bulleted list of facts. The students moved through this list slowly, making notes of these facts in their notes packet.

The websites that students selected, then, were text-heavy and students moved through them linearly. However, the trade books the students had access to in this classroom were selected and placed in the classroom by Ms. Carter. In stocking her classroom for this study, she carefully selected rich and engaging informational trade books that offered readers a range of meaning-making opportunities. For example, a popular book in the classroom was *Eleven Planets: A New View of the Solar System* (Aguilar, 2008). A typical two page spread from this book might include several photographs of moons, with captions beneath each image; a small diagram in the margin showing where a particular planet

sits within the solar system; a photograph taken by a space craft of a storm on one of the planets; and a drawing of the symbol for a planet accompanied by a caption briefly explaining some of the mythology associated with that symbol and planet. In general, although the pages in this book do include quite a bit of text, there are figures and photos and multiple entry points into the pages. Yet, even when they encountered these books, books that in fact had many more multimodal possibilities than the linguistically-dominated Internet texts the students selected, the students continued to spend most of their time reading, quite linearly, through the books, focusing on the central linguistic text, and not on the auxiliary text, photos, captions, diagrams, etc.

As we have argued in other places (Maloch & Zapata, 2011, 2012), the practices these students engaged in around texts were situated and associated with a range of contexts—including design of the task, instructional emphases of the teacher, the format and features of the text under consideration, and the social composition of the group. With that in mind, when we speculated about this group's inclination towards information-heavy text and linear navigation, we wondered if, perhaps, their work was associated with the task design—specifically, the focus on finding information about their planet collaboratively and the centrality of the note-taking packet. This material scaffold provided by Ms. Carter seemed to be associated with the ways all of the students approached the informational texts. That is, the students were not researching a conceptual problem or gathering data to answer a particular big question. Instead, they were gathering a range of information about a particular object. We could see this connection in the ways Caroline, SeEun, and Liam were focused on finding information, held their note-taking packets in their laps, and spent little time studying photos, which suggested they believed that only the linguistic information in books might provide what they needed.

Yet, students within this one classroom responded to this task differently. So, while the task design was clearly associated with the way students worked with texts, the ways in which that played out within the group varied. One might assume that this group's focus on linguistic information was simply related to their personal inclinations towards text. That theory, however, did not hold up for us as we observed Caroline and Liam (when SeEun stepped away) become quite engaged with the photographs. Clearly, there were other issues at play; those issues are the focus of our next section.

Interpersonal Dynamics

The interpersonal dynamics of the group constituted the third theme in this data. Specifically, we discuss here the way one student's participation worked to control the group's approach to text and the task, not in a totalizing way, but enough that it limited access for the other students—both access to the text and access to opportunities for meaning-making. In every session of research, SeEun functioned as the clear leader of the group, controlling the book or text selection, controlling the mouse or the book and thus the navigation of the text, and determining what information was recorded. This situation was not as problematic as it may seem—Caroline and Liam were able to interact and engage with the text—but SeEun's controlling influence had consequences for students' access to the text and the intellectual work of the group.

During each of the group work sessions SeEun attended, she positioned herself as the leader of the group through telling and directing utterances, assumption of control with regard to book selection and navigation, and evaluative comments directed towards the other two students. Early on, in a session around the computer, SeEun explicitly named herself as the one in charge – "I'm the leader." During all of the sessions, SeEun gave directions to Caroline and Liam. For example, when the three students sat together on the floor to look through the trade books, SeEun selected the book and then gave directions to the other two—"Now you two write that down, while I . . ." . She also evaluated their suggestions and comments. In one session, when Liam made a comment about Saturn's rings, SeEun responded with, "You didn't know that?" On several other occasions, SeEun dismissed information found by Liam or Caroline as not needed (as we show below).

SeEun's self-appointed leadership of this group also showed up in the ways the students positioned themselves in their work. In terms of body arrangement, SeEun consistently positioned herself in the middle of the other two students—both in front of the computer and when exploring trade books, as can be seen in the photos on page 94.

Figure 5: SeEun, Caroline, and Liam reading from a trade book

Figure 6: SeEun, Caroline, and Liam viewing a website

In the photo on top, you see the book opened and sitting on SeEun's lap. The field notes from this point in the data are excerpted as follows.

> Caroline is now reading. SeEun is in middle of Liam and Caroline with book balanced on her leg. When Caroline finishes the page, SeEun looks down at her note-taking guide, and then turns the page of the Simon book. SeEun is eating a snack, which might explain why Caroline is reading. Caroline picks up book to pull it closer to her to read. SeEun takes the book and pulls it back to the middle, on her lap. Caroline is on her knees leaning over SeEun so she can see it.

The students' body arrangement in relation to one another and in relation to the text under consideration reified SeEun's position of leadership. Also evident in the photos above is SeEun's control of the navigation of these texts—a pattern we saw across all of their research sessions. In the photo on the right, you can see SeEun's hand on the mouse as she navigates the text. Both the collaborative work around online texts and collaborative work around print texts involved some sort of division of labor. Students sitting around one computer with only one device to control the screen and movement through the text must divide the work. Because they are sharing one screen, they must negotiate who controls the navigation of the text, where they stop to read, and how they make sense of the text.

However, SeEun's physical control of the mouse did not translate into a totalizing control of the site navigation. In the next excerpt, for example, SeEun opened up the conversation for input from Liam and Caroline about where they might go next, and at one point even gave up control of the mouse to Caroline.

> Caroline: I bet we're going to go to a lot of websites.
> Kidsastronomy.com is a good website.
> SeEun: Do you guys want to go to Starchild.gfc.nasa.gov (another one generated by the original search)?
> Caroline: First, let's go to this one (using the mouse to move cursor to the one she is suggesting). We just wrote it down.
> SeEun: I know, but after that (SeEun takes the mouse back).
> Caroline: We could click on the planets instead of the ** ** (pointing to the screen).

In this example, SeEun opened the floor to conversations about where they might go to find more information. Once they arrived at the site, however, conversations about what they should make note of and where they might record their new information were determined primarily by SeEun. In the next example, the three students view a page that included a bulleted list

of facts about Saturn (seen in a screen shot displayed on page 91). The three begin to discuss the information from the bulleted list and where they should record each bit of information.

> SeEun: (after reading the first bullet point, begins paraphrasing) So, Saturn is the second largest planet in our solar system. And the weight is over//
> Caroline: //How far is your planet from the earth?!?
> SeEun: No.
> Liam: Let's do physical features (points to screen)
> SeEun: "Why would that go in physical features?"
> Liam: Cause it's the largest planet (this is overlapped by Caroline saying, "How far is your planet from the sun? How far is your planet from the sun?")
> Liam (responding to Caroline): That doesn't tell you
> Caroline: Yeah
> Liam (looking at screen): Where?
> Liam: Oh (taps on screen with his pencil; Caroline does, too).
> They see that the next fact tells about the distance from the sun – SeEun reads that fact out loud.
> SeEun: Got it (and students all start writing).

In this example, Caroline and Liam both seemed to be trying to convince SeEun of where they should record the information in their note-taking packet. Here, SeEun took on the position of leader and the other two students were positioned (or positioned themselves through their questioning) as needing "permission" before they recorded information in their notes packet.

The inequitable social dynamics present in this group had implications for their work together and their work with texts. Specifically, SeEun's control of the process limited Caroline's and Liam's access to the intellectual work of this research. Rather than collaborating about potential ways to categorize information, or discussing their learning about the planet, SeEun acted as a "gatekeeper" of sorts. And because she, in particular, was so focused on the task—gathering information and completing the notes packet—in her approach to the texts, she tended to lean more heavily on the words in texts, paying little attention to the graphic resources. Because of her prominent influence in the group, Liam and Caroline often approached the texts in the same way, and as a consequence, consideration of visual resources and conversations around them were limited.

This approach to tasks was not always followed. We point out a notable

exception to this pattern in our example below:

> Liam is reading. When he stops (he's just read "most of the moons are covered by ice and pockmarked with craters,") SeEun points at the picture (and of a moon in the picture with a noticeable crater), and says, "Remember this one?"

Figure 7: SeEun pointing to picture in trade book.

> Caroline: Ah, I remember that one. That was a weird one. It's like a moon that something hit and made a crater inside (motions with her hands).

And then a few minutes later:

> SeEun turns the page to the two facing pages that show two pictures of moons (Enceladus and Tethys)
>
> Caroline: That's the one with the big crater.
>
> SeEun: No, it's not. It was like this big (showing with her pencil how the big crater would cover half the planet; Caroline seems to agree with her).
>
> Liam: This is [Enkaladus]
>
> Caroline: (to a group sitting close). Did you know that one of Saturn's moons has a gigantic crater on it? It's like the only crater it has, but it's gigantic.
>
> SeEun: It's like half the moon.
>
> Caroline: You can see it, right there (flips to the page before and points to the moon on the larger diagram; the one they'd referred to earlier).

In this excerpt, all three students study the photographs carefully, comparing them to previous photos and to what they have already learned. Here, we see more conversation about what they are learning than in other parts of the data. There were also moments, like the one portrayed above, in which students engaged with the photos of the book and not just the printed words. We are not entirely sure, but we suspect that because of the portability, multiple copies, and variety of informational picture books, and the way these texts hold still (SeEun can't quickly scroll away or click on another link), students' work with print texts seemed to afford at least a few more opportunities to engage in these kinds of ways, at least in this classroom.

Conclusion

As more students begin to engage with informational text in the classroom, it's important to consider the ways children learn about and from informational text in interaction with their peers. This case study considers the ways in which a group of three third-grade students interact with digital and print-based informational texts – and with each other - while engaging in an inquiry-based project on the solar system. An analysis of these interactions generated three themes: (1) Students employed a range of strategies, such as orienting to the text, attending to accuracy, gesturing, and paraphrasing, to make meaning of the texts in collaboration with their peers; (2) Students engaged in print-based and online informational text in similar ways, and in ways that were text-centric; and (3) The interpersonal dynamics of the groups appeared to be strongly associated with how students engaged with the texts and project.

The activity of making meaning across informational texts makes visible the ways readers navigate varied forms and structures of texts and their accompanying features and demands. Students' work with one another and work with texts can be viewed as not just a set of behaviors, but as social practices. The practices in which they engaged, in, with and around texts seemed to be associated with the contexts in which they occurred as well as the experiences students brought with them to the present moment. Situated within a community of inquiry, young children's collaborative readings of informational picture books and web-based texts were bound by the ways each text was designed, associated with the reliability of the content, and rooted in the social dynamics within the group.

We intend for the analysis presented here to contribute in three ways. First, this work contributes to the growing number of studies that attempt to document how young children (third graders, in this case) approach online and printed informational texts and how they go about making sense of these texts in collaboration with others. That is, studying these three students and the ways they worked together (or not) and navigated

through texts of varying kinds provides insights—at a case level—into how young children approach such texts. Although it is not our intent to suggest that these findings might be generalizable to other classrooms or groups of students, we do argue that the presentation of this case, with all its complexities, might become a resource for teachers' thinking, as they consider how their own classroom contexts fit or don't fit with this one and what they might take from this work that is suitable within their own contexts. This work adds to other case study work (Duke & Kays, 1998; Maloch, 2008; Maloch & Zapata, 2011, 2012; Smolkin & Donovan, 2001) to illustrate the complexities involved as young readers come into contact with informational texts of varying kinds as situated in particular instructional contexts and tasks.

Second, along these same lines, the value of an up-close analysis of one group or set of students is to help educators and researchers understand more fully the ways in which students' work is situated and associated with a variety of factors. This analysis suggests that we should be careful about how we mandate instructional approaches across classrooms. It also calls to mind the ways that material scaffolds provided by teachers as a means of support might be taken up in unanticipated ways. In combination with the inequitable social dynamics often (always) at play in classrooms, these scaffolds may become straitjackets for students that strap them into particular ways of "taking information" from text and move them away from more engaged interactions with the content and their peers. Social dynamics also speak to the ways teachers might be careful to intervene in these groups. It suggests to us that this collaborative talk does not just magically unfold. Teachers step in to model how to negotiate "together" and make intentional steps towards scaffolding this kind of collaboration and work together and with text. This case offers a portrait of the problematic interactional dynamic that might occur in classrooms and one that teachers could watch out for and intervene when necessary.

Third, that these students tended to approach online and print texts in similar ways is not surprising as readers typically call upon their prior experiences with texts to make sense of new ones. But, it seems to call for the possibility of greater explicitness and intentionality by teachers as they direct students towards online sources, particularly as it relates to online information text selection, navigating special features of online texts (i.e., hyperlinks, videos, scrolling…), as well as making sense of those special features. Despite the availability of multimodal resources and special features that linked to additional information, the students in this group chose to focus on the linguistic information within texts with more multimodal possibilities, and, when given the choice, they similarly selected online resources that were text-centric.

References

Aguilar, D. (2008). *Eleven planets*. Des Moines, IA: National Geographic Children's Books.

Almasi, J. (1995). The nature of fourth graders' sociocognitive conflicts in peer-led and teacher-led discussions of literature. *Reading Research Quarterly, 30* (3), pp. 314-351.

Bradley, L.G., & Donovan, C.A. (2010). Information book read-alouds as models for second-grade authors. *The Reading Teacher, 64,* 246-260.

Castek, J., Leu Jr, D. J., Coiro, J., Gort, M., Henry, L. A., & Lima, C. (2007). Developing new literacies among multilingual learners in the elementary grades. In L. Parker (Ed.), *Technology-mediated learning environments for young English learners: Connections in and out of school* (111-153). Mahwah, NJ: Erlbaum.

Caswell, L.J., & Duke, N.K. (1998). Non-narrative as a catalyst for literacy development. *Language Arts, 75,* 108-117.

Coiro, J. (2012): The new literacies of online reading comprehension: Future directions, *The Educational Forum, 76,* 412-417.

Donovan, C. A., & Smolkin, L. B. (2002). Considering genre, content, and visual features in the selection of trade books for science instruction. *The Reading Teacher, 55,* 502–520.

Duke, N. K., & Kays, J. (1998). "Can I say 'Once upon a time'?": Kindergarten children developing knowledge of information book language. *Early Childhood Research Quarterly, 13,* 295-318.

Duke, N. K. (2000). 3.6 minutes per day: The scarcity of informational texts in first grade. *Reading Research Quarterly, 35,* 202-224.

Duke, N. K. (2003). Reading to learn from the very beginning: Information books literacy in early childhood. *Young Children, 58*(2), 14–20.

Dyson, A. H., & Genishi, C. (2005). *On the case: Approaches to language and literacy research*. New York, NY: Teachers College Press.

Gill, S. R. (2009). What teachers need to know about the "new" nonfiction. *The Reading Teacher, 63,* 260-267.

Gregg, M., & Sekeres, D.C. (2006). Supporting children's reading of expository text in the geography classroom. *The Reading Teacher, 60,* 102-110.

Jeong, J., Gaffney, J., & Choi, H. (2010). Availability and use of informational texts in second, third, and fourth-grade classrooms. *Research in the Teaching of English, 44,* 435-456.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.

Lewis, C. (1997). The social drama of literature discussions in a fifth/sixth-grade classroom. *Research in the Teaching of English, 31* (2), 163-204.

Maloch, B. (2002) Scaffolding student talk: One teacher's role in literature discussion groups. *Reading Research Quarterly, 37* (1), 94-112.

Maloch, B. (2008). Beyond exposure: The uses of informational text in a second grade classroom. *Research in the Teaching of English, 42,* 315-362.

Maloch, B., & Zapata, A. (2011). "Dude, It's the Milky Way!": An exploration of students' approaches to informational text. In P. Dunston, L. B. Gambrell, S.K. Fullerton, V.R. Gillis, K. Headley, & P.M. Stecker (Eds.), *60th Yearbook of the Literacy Research Association* (332-335). Oak Creek: WI.

Maloch, B., & Zapata, A. (2012). The social and textual practices of third graders with informational texts. In P. Dunston, L. B. Gambrell, S.K. Fullerton, V.R. Gillis, K. Headley, & P.M. Stecker (eds), *61st Yearbook of the Literacy Research Association* (pp. 307-321). Oak Creek: WI.

Mercer, N. (1995). *Guiding the construction of knowledge*. Bristol, PA: Multilingual Matters, Ltd.

Mercer, N. (2000). *Words and minds: How we use language to think together.* London, England: Routledge.

Moss, B. (2008). The information text gap: The mismatch between non-narrative text types in basal readers and 2009 NAEP recommended guidelines. *Journal of Literacy Research, 40,* 201-219.

Palmer, R. G., & Stewart, R.A. (2005). Models for using nonfiction in the primary grades. *The Reading Teacher, 58,* 426-434.

Pappas, C (1991). Fostering full access to literacy by including information books. *Language Arts, 68,* 449-462.

Parsad, B., Jones, J., & Greene, B. (2005). Internet access in U.S. public school and classrooms: 1994-2003. U. S. Department of Education. Washington, D.C.: National Center for Educational Statistics. Retrieved November 10, 2012 from http://nces.ed.gov/pubs2005/2005015.pdf

Purcell-Gates, V., Duke, N., Martineau, J. (2007). Learning to read and write genre specific text: Roles of authentic experience and explicit teaching. *Reading Research Quarterly, 42,* 8-45.

Siegel, M. (1995). More than words: The generative power of transmediation for learning. *Canadian Journal of Education/Revue Canadienne de l'Education, 20,* 455-475.

Simon, S. (1985). *Saturn*. New York, NY: Harper Collins.

Smith, M.C. (2000). The real-world reading practices of adults. *Journal of Literacy Research, 32,* 25-52.

Smolkin, L. B., & Donovan, C. A. (2001). The contexts of comprehension: The information book read aloud, comprehension acquisition, and comprehension instruction in a first-grade classroom. *The Elementary School Journal, 102,* 97-122.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory and procedures and techniques*. Newbury Park, CA: Sage.

Vygotsky, L.S. (1978). *Mind and society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.

Wells, G. (Ed) (2001). *Action, talk, and text: Learning and teaching through inquiry*. New York, NY: Teachers College Press.

Wells, G. (1999). *Dialogic inquiry: Toward a sociocultural practice and theory of education*. New York, NY: Cambridge University Press.

Wertsch, J.V. (1991). *Voices of the mind: Sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.

Williams, J., Hall, K., Lauer, K., Stafford, K., DeCisto, L., & deCani, J. (2005). Expository text comprehension in the primary grade classroom. *Journal of Educational Psychology, 97,* 538-550.

Wolfenbarger, C. D., & Sipe, L. R. (2007). A unique visual and literary art form: Recent research on picture books. *Language Arts, 84*(3), 273-280.

Yopp, R.H. ,& Yopp, H.K.. (2012) Young children's limited and narrow exposure to informational texts. *The Reading Teacher, 65* (7). 480–490.