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# Texas Journal of Literacy Education

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The *Texas Journal of Literacy Education* is a peer-reviewed journal of the Texas Association for Literacy Education which is the state affiliate of the International Reading Association. This journal is intended for literacy educators at all levels of instruction and to all groups of students.

# Table of Contents

## Message from the Editors

Welcome to the *Texas Journal of Literacy Education*

i

## Featured Articles

A Case Study of the Role of Reader Response in Two Elementary Classrooms Sheila Delony, Ellen Smith Morgan, and Kaitlyn Leah Howell	1-12
All Reading Tests Are Not Created Equal: A Comparison of the State of Texas Assessment of Academic Readiness (STAAR) and the Gray Oral Reading Test-4 (GORT-4) Kary A. Johnson, Celia M. Wilson, and Dara Williams-Rossi	13-21
Beginning the Dialogue: Talking about Literature in the Teaching of Multicultural Education Jennifer Dyer Sennette, Tamara Pizzoli, and Tami Morton	22-28
Concept Maps and Informational Read-Alouds: Strengthening both Science and Reading for Elementary Students Jaime Berry, Jalene Potter, and Victoria Hollas	29-44
Engaging Readers, Increasing Comprehension, and Building Skills: The Power of Patterned Books Stephanie Grote-Garcia and Patricia Durham	45-53
Innovate Literacy Instruction with a Classroom Computer: A Solid Rationale for the Integration of Specific Digital Tools Laurie McAdams	54-59
Defining Literacy in the 21 <sup>st</sup> Century: A Guide to Terminology and Skills Jodi Pilgrim and Elda E. Martinez	60-69
When Every Hand is a Winner: Developing Critical Thinking with a Card Game Deborah Davis, Velery Fasano, and Jennifer Starling	70-76
<b>Special Series</b> Sharing Common Ground: Texas and the Common Core State Standards Sheri Vasinda, Stephanie Grote-Garcia, and Patricia Durham	77-89

Greetings TALE members and other literacy leaders,

As the new Texas affiliate of the International Reading Association (IRA), we are excited to bring you the first issue of Texas Association for Literacy Education's (TALE) journal, the *Texas Journal of Literacy Education*. Our goal is to offer a mix of research and practice articles that are of particular interest to Texas teachers and educational researchers at all levels.

In this premiere issue you will find articles that address quality literacy practices and reflect relevant research-based instruction strategies for primary grades through graduate school. You'll learn how pattern books can support reading comprehension from emergent readers to fluent readers as well as the power of reader response for critical thinking and expanding the curriculum. Within these pages you will discover a new strategy for integrating literacy skills in science by pairing informational read-alouds with vocabulary concepts maps for a lasting effect not only on vocabulary acquisition but written expression as well. Another content area literacy integration strategy highlights the power of book discussion groups at the graduate level providing space to for more critical thinking and deeper learning to occur in a multicultural education course. You certainly won't want to miss how a card game used to develop critical thinking in another graduate course could be adapted to almost any grade level and any subject. Find out how!

Because we live in a digital age, this issue features two articles supporting technology integration: one furthers our understanding of terminologies that surrounds new literacies, and the other offers ideas and examples of computer software applications to support literacy with solid rationales as to their benefits. We also live in a world that emphasizes testing. If you are interested in a deeper examination of how reading comprehension was conceptualized on STAAR for struggling middle school students as compared to the Gray Oral Reading Test 4, we've got an article for that! Be sure to check out the appendices at the end of each article for great examples of reading responses, book lists, or research support.

Additionally, Texas finds itself in a unique position as the majority of the nation has adopted a set of standards we hear a lot about, but do not use in our public schools. The TALE Board designated a special task force to examine the Common Core Standards and how they compare to our Texas Essential Knowledge and Skills. This inaugural issue launches a four-part series that begins with a historical perspective and why Texas uses their own standards.

Finally, we wish to thank all those who submitted their work and to our review board. This journal would not be possible without the work of graduate students, practicing teachers, and educational researchers who both submit their work and offer to review the work of others. Please take a moment to recognize the review board and consider submitting your great teaching ideas and research findings, or serving with us. If you know of a colleague doing wonderful work, offer to help write it up in order to share it with others. Submit the kind of work you like to read about!

Best wishes,

Leslie Haas, Susan Szabo, Debra Lee, and Sheri Vasinda

# A Case Study of the Role of Reader Response in Two Elementary Classrooms

Sheila Delony  
Ellen Smith Morgan  
Kaitlyn Leah Howell  
Abilene Christian University

## Abstract

*The purpose of this case study was to identify the role of reading response in two elementary classrooms: one first-grade and one fourth-grade. The study examined the structured and incidental opportunities students had for response, the formats of their responses and the utility of the responses to each teacher. Qualitative data collection methods, including classroom observation and semi-structured interviews were employed. Analysis of the data led to four major conclusions. First, a sense of classroom community fostered authentic, aesthetic responses to text. Second, tensions existed between the prescribed curricula and teachers' attempts to promote authentic reader response. Third, reader response was used for accountability and assessment. And finally, students' prior experiences and skill levels impacted the teachers' perceptions of their abilities to respond to texts in meaningful ways.*

Louise Rosenblatt's (1982) transactional theory explains that the reading process is an interaction between the reader, the text, and the context of the reading event in order to construct understanding of the text. The author, the text, and the reader all have a role in the interpretation of meaning. Meaning cannot be *found* in the text or *found* in the reader but in the interaction between the two. In line with Vygotsky's (1978) constructivist notions, Rosenblatt (1978) asserts, "the reader's creation of a poem out of a text must be an active, self-ordering, and self-corrective process" (p. 11). The text merely activates the thought processes already existing in the reader. The value of a text is not the text itself, but rather a reader's experience with it. In fact, subsequent readings of the same text by the same reader are likely to

differ as the reader has a changed understanding.

The meaning a reader constructs is heavily impacted by the stance the reader takes, which exists on a continuum from efferent to aesthetic (Rosenblatt, 1978). Features of the text or the purpose of the reader contribute to the choice of reading stance chosen. When reading with an efferent stance, the reader is mostly concerned with the information he/she needs to retain while reading the text. The reader's attention is focused on determining importance and locating key facts. Text features that prompt a reader's efferent stance include text titles, bolded headings, illustrations, photographs and captions. When reading from a primarily aesthetic stance, the reader predominantly attends to what is felt and experienced during the reading event. Taking an aesthetic stance

compels the reader to connect with the reading in personal ways.

Written responses to reading have been used to assess the transaction between a reader and text in order to explain why there were variances in responses (Richards, 1929). Subsequent studies suggest students' developmental levels and teachers' teaching approaches impact the content of students' responses to texts as well as their stances toward literature (Purves & Rippere, 1968; Many & Wiseman, 1992; Wiseman & Many, 1992).

Instructional approaches that foster an efferent stance include promoting strategies for locating information, identifying main idea, and determining the author's intended meaning. Annotating text sections or reading a set of questions before reading the text also prompts students to take an efferent stance. Instructional methods that foster an aesthetic stance include encouraging students to make text-to-self connections to what they have read or drawing on students' experiential knowledge to encourage predictions, visualizations, and creative questions to further their construction of meaning. In their exploratory study, Sinha and Janisch (1995) found that teachers might disregard the stance suggested by texts or adopted by readers for the sake of teaching particular reading skills that can limit students' responses to primarily retelling surface information from the text.

## Methods

In light of the relationship between teaching approaches and reading response, this qualitative case study sought to

examine the role of reading response in two elementary classrooms: one first-grade and one fourth-grade (Wolcott, 1990). The purpose of the study was to identify the structured and incidental opportunities students had for response, the formats of their responses and the utility of the responses to each teacher. The case to be studied was the role of reading response as it was demonstrated in a first-grade classroom and a fourth-grade classroom during daily reading instruction.

## Setting and Participants

The study took place in a Title I elementary school, in a mid-sized city in Texas. The school was most recently rated Acceptable by the Texas Education Agency as the result of the students' state test scores in 2010-2011. In the 2011-2012 school year the student body consisted of 19.1% African American, 46.4% Hispanic, 27.1% White, and 2.1% Asian students as well as 4.5% of students of two or more ethnicities.

## Students

Twenty-eight students participated in the study. There were 12 first-graders (three girls and nine boys), and 16 fourth-graders (eight girls and eight boys). Their ethnicity mirrored that of the school.

## Teachers

The first-grade teacher, Mrs. Parker (pseudonym), a white female, graduated from a four-year university. She was in her first year at this particular campus but had seven years of previous teaching experience. Her previous experiences included two years of kindergarten and five years of pre-kindergarten. Mrs. Parker was introduced to balanced literacy approaches during her undergraduate teacher

preparation. In response to prevailing practices when joining her current campus, she engaged in a self-study of the Daily Five (Boushey & Moser, 2006) approach using books, videos, and informal dialogue with colleagues before beginning her first-grade placement. She explained that since her previous teaching experience was with younger children, she felt confident in teaching reading skills, she but believed that she needed to grow in the area of teaching reading comprehension strategies. She listed many professional books that she was reading in an attempt to grow in this area.

The fourth-grade teacher, Mrs. Anson (pseudonym), also a white female, graduated from a four-year university and was immediately hired to teach in one of the elementary schools with which her alma mater has a professional development partnership. At the time of this study, she was in her second year of teaching. Her university literacy training focused on readers' workshop and she embedded those philosophies into her teaching. Since graduating, she continued to receive both formal and informal professional development from professors at the university. Her school implemented a balanced literacy approach during her first year of teaching, and university liaisons aided the teachers in that transition. Mrs. Anson reported that she reads often outside of school, and she desired to pass her enjoyment of reading on to her students. In her lessons, she aimed to focus on the idea that "reading is a real life thing" (personal communication, November 2, 2012). In order to do so, she avoided using the basal reading series and instead allowed students to self-select books that were

appropriate for their reading levels and that interested them.

### **Procedures and Data Analysis**

Four sources of data were collected over a five-week period during the fall semester. First, three semi-structured interviews (Appendix) with each teacher were conducted (Seidman, 2006). The first interview took place prior to any other data collection and focused on each teacher's preparation for teaching reading, her teaching experience and her personal experiences with reading and responding to reading. The intermediate interview took place during the window of classroom observations and focused on each teacher's perceptions of their students as readers and the ways that they see their students respond to their reading. The final interview was conducted after the conclusion of the classroom observations and focused on the perceived utility of the students' reading responses.

Second, each classroom was observed and qualitative field notes were taken. In the first-grade classroom, the researchers observed a one-hour block of reading instruction two times per week for a three week period, totaling six observations. In the fourth-grade classroom, researchers observed two times per week for two weeks as well as one additional observation during the third week, totaling five observations. Observations were conducted until a point of data saturation was reached in each setting. Researchers discontinued observations at the point when the routines, teachers' roles, and student activities yielded no new significant data. During the observations, the focus was on the opportunities students had for

response and the formats of their responses as well as each teacher's role in allowing, promoting, or structuring those responses. Last, the teachers' lesson plans and student work samples were collected as sources of data triangulation. The teachers' weekly lesson plans were examined to confirm that the observed lessons were an authentic representation of larger units of study. On occasions when the student work samples included responses to their reading, the researchers collected copies of that work as evidence of the students' application of the lesson. In the first-grade classroom, student work samples included one list of connections to a story read aloud and three worksheets with one text-to-text connection written and drawn. In fourth-grade class, this included two sets of reader response journals.

Data analysis was ongoing and recursive. The researchers began analysis using open coding methods, independently identifying broad themes. The researchers then worked collaboratively to compare, collapse, and revise themes as needed. This initial stage of analysis resulted in five broad themes. Next, each grade-level case was analyzed independently using these themes, resulting in further refinement of the data display. Finally, the two grade-level cases were re-examined through the lens of the initial findings (Guba & Lincoln, 2005).

## Findings

### First-Grade Classroom

The focal point of Mrs. Parker's classroom was an interactive white board and large area rug at the front of the room. On the edge of the rug were an easel and the teacher's chair. The students' desks were

arranged in groups of four and five. Other desks were pushed against the wall, creating stations for computer work, writing, math, etc. The room also had a kidney-shaped table and a class library. Mrs. Parker's curriculum followed the district-mandated scope and sequence, and she used the lesson plans provided by that program as a resource for her lesson planning. Mrs. Parker expressed concern that her students did not begin the year with the prerequisite skills required to progress at the pace dictated by the district-mandated program. She reported that her students were not yet able to self-select texts and that they struggled with writing independently. The struggle was observed in one lesson during which she instructed the students to write a connection to their book. After seeing the students' attempts, she modified the assignment and asked the students to draw a picture of their connections. In a subsequent lesson, she provided sentence stems for the students to complete. Despite their struggles, Mrs. Parker described the students as readers and stated that they "amazed (her) with their growth" (personal communication, November 14, 2012). She used a combination of whole class instruction, student workstations, and guided reading groups in her daily reading class time.

### Whole Class Instruction

Mrs. Parker began each reading class by directing the students to come to the rug. She read a book out loud and taught her reading lesson using the book. These lessons were focused primarily on reading comprehension strategies. During her read-alouds, she modeled the reading strategy that she was teaching and also shared her affective responses to the texts. During these times, the students also shared their



thinking and responses, both solicited and spontaneous. While the topics of the lessons were directed by the scope and sequence, Mrs. Parker drew on several professional resources to find book recommendations and ideas for how to communicate and model the strategies.

### **Workstations**

After the whole-group lesson, the students were dismissed to complete an independent reading assignment, often in the format of a worksheet. The assignments had a direct connection to the whole-group lesson. For example, after a lesson on making text-to-self connections, the students were given a page to draw a picture from the text and a picture from their own lives. Upon completion of the worksheet, the students began independent tasks including independent reading, reading with a partner, listening to an audio book, writing in journals, and practicing their spelling words. These tasks were dictated by a schedule posted on the white board. Most students were engaged and on-task during this time. Though it was uncommon, the students most likely to be off-task were the ones working on their spelling words or writing in journals. They demonstrated a clear preference for listening to the audio books and reading with a partner. When reading to a partner, the students often followed the reading with a discussion of the book. They would go back to favorite pages or illustrations or express an opinion about the characters. At times, students would carry their books to Mrs. Parker to show her something in the book they were reading. The students read from their library books during the independent and partner reading rotations. Mrs. Parker explained the challenge of helping the students make their selections;

initially, they grabbed books with no intentionality. By encouraging them to examine the cover and read the first pages of the books, she reported that they have made some progress. She also explained that the students enjoy checking out books that she has mentioned reading or enjoying.

### **Small Group Instruction**

During the students' independent work time, Mrs. Parker worked with groups of two to five students at the kidney-shaped table using leveled texts. Mrs. Parker considered her guided reading lessons to be the time when she taught the more basic "skills of reading" (personal communication, November 14, 2012) as opposed to the more complex and aesthetic comprehension strategies she addressed in her whole group lessons. Each began with a preview of the book that included a discussion of the cover, genre, and predictions followed by the students reading aloud independently while the teacher monitored and assisted as needed. The sessions concluded with a brief retelling of the book's content followed by a brief opportunity for students to respond orally to the text. The texts were added to the students' book bags to read at home. Mrs. Parker explained that she often used her small group time to assist her students in completing tasks that, according to the scope and sequence, her students should be doing independently. For example, rather than independently selecting a book, reading it, and then writing one text-to-self connection, Mrs. Parker gave the students the opportunity to orally share a connection that they made with the leveled text. After the first small group, Mrs. Parker directed the students to their second round of independent tasks and worked with a second small group. At the conclusion of

the second group, she instructed the students to put their things away and transitioned to the next part of their day. In the first-grade classroom, most of the students' opportunities to respond to their reading were incidental. The students made comments during a story read aloud by the teacher and shared their responses when reading with a partner, but the teacher did not prompt those responses nor were they recorded or used in intentional ways. The students did have structured opportunities to share text-to-text connections during that series of lessons and those responses were collected and assessed by the teacher. Her assessments served to adjust her delivery of that series of lessons and to document the students' mastery of the curriculum standards. However, before that series of lessons, and at its conclusion, the opportunities for structured or solicited reading responses were minimal.

### **Fourth-Grade Classroom**

Mrs. Anson arranged her students' desks in groups of four to six students. At the end of each table, she kept a plastic, rolling set of drawers. Each table of each reading class had its own drawer in which to store their books, their reading response notebooks, and other supplies. At the front of the room, a colorful wooden chair and a flip chart faced a large circular area rug where the students sat during direct instruction. Mrs. Anson devoted one of the classroom's bulletin boards to book recommendations. Slips for recommending books were always available for students, and they had the opportunity to encourage others to read certain books and justify their endorsement of the book. In addition, Mrs. Anson recommended books. She explained that

even though the fourth-graders were typically able to choose books themselves, "some of them still [would] ask [her] for recommendations, or they ask each other" (personal communication, December 2, 2012).

### **Whole Group Instruction**

Mrs. Anson began each reading class with a brief writing assignment. She used the interactive white board in her class to display a prompt such as "nobody knows how to read as well as you do. Tell me your biggest strength in reading (something you do well) and your biggest weakness (something you have trouble with)" (personal communication, December 2, 2012). Students wrote down their responses to the prompt on small slips of paper. Next, the class transitioned to the day's focus lesson. Mrs. Anson used this time to provide a small amount of direct instruction on a specific reading skill. At times, she also used the time to review classroom procedures or to split students into "buzzing groups," groups of two-four students sitting next to each other on the rug, to discuss their reading or create written artifacts of their reading and thinking (personal communication, December 2, 2012). During the direct instruction, Mrs. Anson shared her responses to reading and called on students to do the same as it related to the day's lesson. During buzzing time, the students were instructed to share their responses with each other. On Fridays, Mrs. Anson read poetry aloud, shared her personal responses and encouraged her students to share their responses with the class. At the conclusion, Mrs. Anson called the students to return to the rug for sharing time. Mrs. Anson asked them to share a comment with the rest of the class that pertained to the

day's lesson; for example, one day she asked each student to tell the class his or her book's purpose. The primary focus of the regrouping was for the students to have opportunities to share their responses with Mrs. Anson and their classmates. Sharing time marked the conclusion of the reading class time.

### **Individual Work and Conferences**

After the time on the rug, the students took their books from the drawers or from labeled tubs on the bookshelf and chose their spots for reading. Occasionally, multiple students chose to read the same book at the same time, and Mrs. Anson provided an opportunity during the independent reading time for that group of students to discuss their books. Each day, Mrs. Anson called on a different group of students to choose from a selection of large floor pillows and body pillows. She played instrumental music and the students read by lamplight and natural light. Each week, Mrs. Anson expected the students to create written responses to their reading via a password protected website. In each response, she asked the students to include a brief summary of the book, their thoughts about the reading, and questions they had about the reading. In her online responses, Mrs. Anson answered their questions, demonstrated her own thinking about the book, and posed questions and recommendations to the students. She asked open-ended questions so that students could write about what they knew rather than trying to solicit specific answers. Mrs. Anson believed that the strategy avoided question formats that "those lower-levels [students] might be able to answer" and which "the higher-level [students would consider] a breeze for them, and it doesn't challenge them or stretch them in any way"

(personal communication, December 4, 2012). Mrs. Anson used the reader response letters to assess the students' critical thinking levels and their ability to make connections, predictions, and conclusions with supporting details. Because state testing requires higher-level thinking, she believed that reader response letters accurately assessed their preparedness for the test. The letters requiring students to connect their reading to their lives "make them really think deeply about their book" instead of simply reading it "cover to cover" (personal communication, December 2, 2012). She believed that the assessment was reliable because generally the quality of the response letters aligned with the students' data from formal assessments.

### **Independent Time**

During independent reading time, Mrs. Anson conferred with students at a table to the side of the classroom. Sometimes, she asked students what they "notice about this book"; other times, she asked questions such as "how do you know this is nonfiction?" (personal communication, December 2, 2012). At times, she drew a student into the conversation by asking him or her about the characters or other features of the text. The questions she asked did not always address a specific reading skill, but they provided students examples of how to engage with the text. Mrs. Anson followed a pre-determined student rotation and typically met with five to six students during the time allotted for independent reading. She believed that conferring with the students scaffolded their comprehension and helped them respond appropriately to a wide variety of self-selected texts. It also provided a means of monitoring and accountability.

Both structured and incidental opportunities for reading response were woven into the daily routine of the fourth-grade reading class. Students had the opportunity to share their responses to reading during buzz groups, individual conferences, and sharing time on the rug. Mrs. Anson used the notes from her conferences and the reading response journals to assess the students' comprehension and critical thinking and to hold them accountable for their reading time.

## Conclusions

Both of the classroom teachers described themselves as readers and recounted authentic ways that they respond to the texts that they read in their personal lives. In their classrooms, however, opportunities for their students to respond authentically to texts were varied as were their uses of the students' responses. Analysis of the data led to four major conclusions regarding the role of reading response in the two classrooms.

First, a sense of classroom community fostered authentic, aesthetic responses to texts. Mrs. Anson reflected on her own reading and desire to talk about what she read, and she wanted her students to have a similar experience of reading, having opportunities to share their responses with each other. Mrs. Parker's descriptions of herself as a reader included relational contexts; she recounted stories of sharing reading experiences with family members, friends, and roommates. Perhaps because of their own experiences with reading and aesthetic response, both teachers modeled such responses for their students. Teacher

modeling and participation in the community reinforced the relevance and authenticity of reader response. In the fourth-grade classroom, structured and unstructured responses occurred within the contexts of relationships. Even though the response journals were a required assignment, an element of community existed; the students were writing personal letters to Mrs. Anson, and she was responding to them in relational ways. Additionally, the buzzing groups, reading groups, and whole-group time on the rug provided the time, space, and opportunities for students to share their reading responses within the context of the classroom community. Even in first-grade, where reading responses were not integrated into the daily classroom routine, unsolicited response occurred in the whole-group time on the rug, small group instruction, and partner reading--all times of social interaction. As Mrs. Anson noted, reader response allowed for multiple answers, permitting all students the opportunity to contribute to the classroom community. From a transactional perspective, the context of the reading impacts the reading event, thus impacting the readers' response. It follows that a relational context where the students believe that multiple perspectives are valued is likely to nurture authentic responses to reading.

Second, there was tension between the prescribed curricula and the teachers' attempts to promote authentic reader response. Even when working within the constraints of the mandated curricular and testing expectations, Mrs. Anson hoped that reading and responding to authentic texts invited the students to understand that reading is more than a school subject.

Mrs. Anson invited the young readers to make connections between books and their personal lives; during one reading conference, she asked a student whether he thought he “would make a good spy” (personal communication, December 4, 2012). Other such questions asked students to realize that reading has significance to their lives outside of what’s on the page. In fourth grade, holding to a personal philosophy of establishing authenticity despite the constraints of mandated curricula encouraged students to develop into lifelong readers who enjoy reading. In first grade, tensions existed between what the teacher felt that she was “supposed to do” and what seemed natural or made sense to her, though she tried to create links between the two (personal communication, October 16, 2012). This tension impacted the forms and functions of the readers’ responses. This is not to say that curriculum standards were always in opposition to reading response. In the first-grade class, structured opportunities for response only occurred when prescribed by the mandated curriculum. In their attempts to prevent reading from becoming just a school subject by incorporating opportunities for response, however, it may be that reader response was simply being added to the list of school subjects.

Third, reader response was used for accountability and assessment. Reading responses helped both teachers monitor their students’ understanding of lessons. In first-grade, Mrs. Parker adjusted her expectations and approached her lessons in new ways after seeing her students struggle to share text-to-text connections. In fourth-grade, Mrs. Anson used students’ responses to determine whether they were meeting the state’s curricular standards, the Texas

Essential Knowledge and Skills (TEKS). The extent to which a teacher is able to use reading response to assess her students and inform her instruction is related to how intentionally she incorporates response into the reading class. In first-grade, responses that were required by the curriculum were graded formally and assessed the students’ ability to construct a response to a given text. The other limited opportunities for responses were only able to provide vague information. In fourth-grade, Mrs. Anson purposefully incorporated time for students to share what they read on a regular basis. By doing so, she was able to gather more specific data regarding her students’ interests and levels of reading comprehension. At times, she asked the students directly whether or not they understood what they were reading and the reading strategies that they learned during the focus lesson; “it helps [her] know what they are really getting and what they are not more than a test would” (personal communication, December 2, 2012). If most of the students in the class did not express and demonstrate understanding the new concept through their reading responses, then she decided to reteach it. While the connection between response and assessment was somewhat valuable for the teachers, it remained questionable in both classrooms whether the students’ responses could be accepted as authentic or whether their reading stances aligned with textual cues if the students understood that their responses were being evaluated.

Finally, students’ prior experiences and skill levels impacted the teachers’ perceptions of their abilities to respond to texts in meaningful ways. Mrs. Parker’s concern for the students’ delays and her awareness of her own need for professional growth in

this area of teaching may have contributed to her hyper-focus on teaching particular skills and strategies and a lack of attention to providing opportunities for reading response. In both words and actions, she expressed the belief that reading is a developmental process and that a minimal level of skills and experiences were necessary for meaningful reading response to occur. In fact, at times, she believed that the curriculum expected responses that were incongruous with what she believed her students were developmentally capable of doing. Her focus then was on developing the foundational skills for reading and scaffolding their opportunities for response. In fourth-grade, Mrs. Anson believed that the ability to construct meaningful responses began with teaching the students how to select a book that was appropriate for them in terms of both reading level and interest. She believed if students connected with their reading, they would naturally have responses to share. According to Mrs. Anson, many of her students began the semester claiming to hate reading and reading class. However, after about three weeks of choosing their own books and engaging with self-selected texts, these students began to love reading. Mrs. Anson believed that “even though they are not very good readers...if [she] can make them like reading, then [they] can start there and then build the actual reading skills” (personal communication, December 2, 2012). Though the teachers expressed differing beliefs about the relationship between authentic reading responses and reading skills, they both perceived a connection between the two, and that perception impacted the role of reading response in their classrooms. In summary, structured opportunities for reading response originated from both the

prescribed curriculum and from the teachers’ personal positions regarding the affective importance of reading and response. Incidental opportunities for response were often taken spontaneously by students and provided by the teachers in the context of community. The readers’ responses were used to further build those communities as well as to assess the students’ reading comprehension.

## Implications

In a world of high stakes testing and heavily prescribed curricula, opportunities for transactional reading events and authentic responses to reading may seem limited. However, teachers can focus on specific goals in their classroom to foster students’ responses to texts. First, teachers should take steps to create a positive classroom community. Readers often see themselves in relation to other readers, so teachers should intentionally create a community that invites learners of varying abilities, to engage in reading and response. These supportive communities provide a protected space in which to respond naturally and authentically to texts. Second, authenticity can offset the limitations of a prescribed curriculum. Students who are allowed to choose authentic texts and respond to them in both structured and spontaneous ways will learn that reading is more than a school subject. Teachers who model their own reading habits and authentic responses to varied texts further make this point. Finally, assessment should include more than items that a teacher can measure or grade. Students need to think critically in order to meet curricular standards, however test practice is not the way to develop critical thinking. Teachers need to continue using

written responses, oral discussions, and conference notes to assess their students,

promote critical thinking and inform their instruction.

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## **Appendix**

### **Initial Interview**

1. How long have you been teaching?
2. How did you get into teaching?
3. What subjects have you taught?
4. What preparation have you had for teaching reading?
5. What experiences have you had teaching reading?
6. How do you usually feel about teaching reading?
7. What methods of teaching reading have you used?
8. What ongoing professional development have you had for teaching reading?
9. Are you a reader?
10. What do you read?
11. In what ways do you respond to what you read?

### **Intermediate Interview**

1. How are you teaching reading this year?
2. How do you feel about teaching reading this year?
3. How do your students seem to feel about reading class this year?
4. Do you believe your students are readers? Can you explain?
5. What patterns have you noticed in your students' reading?
6. What do your students read?
7. How do your students select books?
8. What patterns have you noticed in your students' reading selections?
9. What opportunities do your students have to respond to what they read?
10. How have you seen your students respond to texts?
11. How do you use the students' responses to what they read?

### **Final Interview**

1. In what ways have the students responded to texts they've read?
2. In what ways have you used students' responses to their reading?
3. How can opportunities for response be helpful to the students?
4. How can opportunities for response be helpful to you as the teacher?
5. What connections can you see between the ways you respond to texts and the opportunities your students have for responding to texts?



# All Reading Tests Are Not Created Equal: A Comparison of the State of Texas Assessment of Academic Readiness (STAAR) and the Gray Oral Reading Test-4 (GORT-4)

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## Abstract

*This exploratory study investigated how reading comprehension was conceptualized on the new high-stakes test, the 2011-2012 State of Texas Assessment of Academic Readiness (STAAR). Specifically, comprehension, rate, and accuracy scores on the Gray Oral Reading Test 4 (GORT-4) from a group of struggling, low-SES, Hispanic middle school students ( $n = 59$ ) were set as predictor variables to examine possible relationships with the STAAR. Initial bivariate correlations showed a weak relationship between GORT-4 predictor variables (comprehension, rate, accuracy) and STAAR ELA scores. Moreover, the overall regression model was not a good fit, with the linear combination of the GORT-4 components of comprehension, rate, and accuracy accounting for only 3.5 % of the variance in STAAR scores. The weak relationship between STAAR test results and the GORT-4 is examined in light of the current research on high-stakes testing, particularly for the at-risk population studied.*

Since the inception of the No Child Left Behind Act of 2001 (NCLB, 2002), formally known as the reauthorization of the Elementary and Secondary Education Act (ESEA, 2002), public school K-12 education has changed. Implementation of high-stakes testing has altered the national teaching landscape in terms of how concepts are taught and how instructional time is allocated. Teacher practices have become increasingly standardized by district mandates; a seemingly rational response for a system desperately striving to meet the demands of federally mandated legislation requiring testing implementation (Amrien & Berliner, 2002; Au, 2011). Yet, research shows

achievement has not truly increased. For example, according to a large-scale longitudinal study conducted on participants from 27 states involved in high-stakes testing, while student scores on high-stakes measures have steadily increased in reading and math, corresponding student scores on the National Association of Educational Progress (NAEP) have not increased (Amrien & Berliner, 2002). In fact, many of the states studied report flat rates of achievement on the NAEP examinations since the advent of high stakes tests (Amrien & Berliner, 2002; Shepard, 2003). Thus, while concerns ushered in by state testing requirements are wide and varied, pressing initial concerns about what high-

stakes instruments actually measure, specifically in terms of reading and language arts, must be addressed (Bracey, 2005). Furthermore, ongoing concerns about singular use of high-stakes testing for diagnostic and intervention purposes must also be addressed (Hale & Fiorello, 2001).

### **Purpose of the Study**

The two research questions were examined for the current exploratory comparative study. First, the research team sought to determine how the 2011-2012 State of Texas Assessment of Academic Readiness (STAAR) measured reading achievement as compared to how a widely utilized nationally normed test, the Gray Oral Reading Test (GORT-4), measures reading. And second, the research team sought to determine if the specific constructs tested by the GORT-4 (reading comprehension, reading rate, and reading accuracy) were in some way predictive of achievement on the STAAR, thereby indicating potential diagnostic utility of the STAAR in terms of intervention planning for struggling students in 6<sup>th</sup> through 8<sup>th</sup> grades.

### **What Do Tests of Reading Measure?**

When investigating various measures of the same domain of achievement, many practitioners and researchers logically assume tests which measure similarly named constructs actually measure the same thing (Amrien & Berliner, 2002). Thus students who struggle with performance on various facets of high-stakes exams, such as the STAAR, simply should receive intervention in the areas of weakness as indicated by the high stakes assessment. Therefore, if all tests of reading comprehension can be held equal, then a student, who performs poorly on a high

stakes measure of reading comprehension such as the STAAR, should simply be provided ensuing interventions in reading comprehension. Unfortunately, though, all tests of reading comprehension are not created equal.

High-stakes assessments are created to measure student mastery of curricular expectations included in the state curriculum (Hintz & Silbergliitt, 2005). Paradoxically, student performance on high-stakes tests of reading such as the ELA portion of the STAAR often do not correlate with or transfer to performance in the classroom and on other measures of reading performance (Shepard, 2003). Lack of transfer likely occurs because different tests of reading measure different constructs, especially in terms of the complex domain of reading comprehension. For instance, in a recent study conducted on low income, urban, middle school students ( $n = 91$ ), researchers found reading skill as measured by traditional reading assessments did not predict performance on high stakes measures of reading. Instead, executive function skills such as self-monitoring and metacognitive awareness accounted for 40% of the variance in high stakes reading test scores (Waber, Gerber, Turcios, Wagner, & Forbes, 2006). Other recent research suggests various measures of reading comprehension are differentially reliant on the factors of listening comprehension and verbal ability, as compared to decoding ability (Keenan, Betjemann, & Olson, 2008). Still other researchers assert reading speed also accounts for unique variance on high stakes measures of reading (Cutting & Scarborough, 2006).

## **Use of High Stake Measures as Diagnostic Instruments**

While not all researchers agree upon which underlying deficits impede reading comprehension and achievement, many agree provision of multiple measures is superior to use of singular measures when determining skills to target for reading intervention (Hale & Fiorello, 2001).

Moreover, as specific tests of reading comprehension have been empirically tied to various related and underlying factors (reading rate, IQ, language ability, listening comprehension, decoding accuracy, and sustained attention), use of multiple assessment tools provides those who plan and implement intervention a more thorough view of areas to target for instruction (Cutting & Scarborough, 2006). Meta-analytic research reaffirms the complex nature of the process of learning in general and learning to read and comprehend in particular, especially for those who struggle in reading acquisition (Adams, 1990; Hale & Fiorello, 2010; NIH 2000; Pennington, 2009; Shaywitz and Shaywitz, 2007). As reading comprehension is not a singular construct, concerns about use of one measure of reading for diagnostic and intervention purposes exist. More specifically, the lack of specific diagnostic information provided by high-stakes achievement tests is particularly concerning. To this end, in 2001, The National Research Council called for a system-wide improvement of the diagnostic data provided by state-mandated high stakes measures, encouraging test developers to provide more thorough feedback to teachers about the strategies children employ when problem solving on such examinations (Madaus & Russell, 2010). Although concerns about the

diagnostic use of high-stakes testing exist, it can be assumed the STAAR, much like its high-stakes predecessor, the Texas Assessment of Knowledge and Skills (TAKS) will continue to be used by teachers and districts to make instructional decisions especially for those students who struggle in reading (Edwards & Pula, 2011, Guskey, 2003).

## **Impacts of High-Stakes Testing**

High-stakes testing is a hotly debated and controversial topic in what many call the era of accountability (Assaf, 2006). Specifically tied to the federal government's No Child Left Behind act of 2001 (NCLB, 2002), testing of all students in reading and in math has become a phenomenon in the American K-12 public education system (Assaf, 2006; Au, 2011). Ensuing system-wide implementation of highly controlled, narrow, test-driven, curriculum has also become the norm of many school leaders (Zhao, 2012). While high stakes tests are supposed to produce a more rigorous system of education, many systematic studies indicate unintended negative results are produced, including increased drop-out rates, decreased graduation rates, decreasing student and teacher motivation, and a narrowed curriculum (Amrien & Berliner, 2003; Madaus & Russell, 2010).

Advocates of high-stakes testing insist a narrowed curriculum allows educators to get "back to the basics" of reading, writing, and arithmetic. And while it is true that more time is allocated to these critical areas, standardization has also led to cuts in non-tested subject areas (Au, 2011; Lobascher, 2011). For instance, Au reported that as of 2010, 71% of US districts had cut one subject to increase time in

math or reading due to the increased high stakes testing focus contained within NCLB (Au, 2011). Moreover, beyond narrowing the content of the curriculum to the basics of reading and math, curriculum has become controlled, not by those in the classroom, but instead by upper level bureaucrats, who often advocate for concepts to be taught in small, discrete, linear units (Assaf, 2006; Au, 2011). For reading curriculum, practicing educators contend the opposite should occur; units of reading instruction should spiral, with reintroduction of important concepts (i.e. main idea, summarization, authors purpose etc.) occurring regularly within various contexts and genres of literature (Atwell, 2007). According to Berliner (2011), curriculum narrowing is the most serious of sins associated with high-stakes testing as it naturally restricts learners from engaging in enjoyable and creative activities, thereby reducing higher level thinking.

Several studies have also linked the advent of high-stakes testing to further marginalization of children living in low socioeconomic status (SES). For example, Marder, Bansal, and Kadanoff (2009), analyzed data from 4.6 million students who took the TAKS in 2003 and in 2007, and found the single most significant predictor of student performance on high stake exams was income level (after reviewing all possible predictors such as past TAKS scores, random guessing, retention rate, and transience). Sadly, this influence of SES on high stakes achievement worsens throughout the middle school years, leading to retention and eventual drop out (Marder, Bansal, & Kadanoff, 2009). Further, in a 2010 study of 14,059 5<sup>th</sup> grade children who were given Florida's high-stakes assessment, the Florida

Comprehensive Achievement Test (FCAT), researchers found only 39% of the low SES students passed, as compared to 65% of the high SES students (Baker & Johnston, 2010).

## Method

### Setting and Participants

The 59 participants for the present study were 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students enrolled in reading improvement classes at one urban middle school in Texas. There were 52 Hispanic students, 3 Caucasian (non-Hispanic) students, 3 Asian students, and one African American student. The sample included 36 females and 23 males. The majority of the students were coded as economically disadvantaged (specific economic codes for individual students within the tested sample were not available to the researchers). Finally, the mobility rate for the campus was approximately 17%, a rate proportionate to overall mobility levels for the state of Texas.

### Instrumentation

For purposes of the present study, comparisons were made between the Gray Oral Reading Test 4<sup>th</sup> Edition (GORT-4) and the STAAR. The GORT-4 is a classically created, norm-referenced, assessment measuring reading rate, reading accuracy, and reading comprehension for students in 2<sup>nd</sup> through 12<sup>th</sup> grade (Wiederholt & Bryant, 2001). GORT-4 internal consistency (reliability) coefficients, reported by the test authors for all areas of the GORT rate, accuracy, comprehension all met or exceeded  $\alpha = .90$  (Wiederholt & Bryant, 2001). For purposes of the present study, internal consistency metrics were also computed with a resultant Cronbach's alpha of  $\alpha = .87$  or better for all tested areas (rate, accuracy, comprehension). As alphas

of .70 or above are generally considered sufficient; an alpha of .87 or above is well within the acceptable range, indicating the GORT-4 was internally consistent for the normative sample as well as the current sample (Henson, 2001).

The STAAR is a newly developed, criterion-referenced, high-stakes test aligned to the State of Texas Curriculum Standards, the Texas Essential Knowledge and Skills (TEKS). In 6<sup>th</sup> through 8<sup>th</sup> grade, the English Language Arts portion of the STAAR provides an individual student total raw score, as well as, raw scores in three subscales: reading comprehension of literary text (including fiction, literary non-fiction, poetry and drama subtypes), reading comprehension of information text (including expository and persuasive subtypes), and understanding and analysis across genres (comparing across all genres in literary text and information text above) (Texas Education Agency, 2011). The STAAR, like many other high-stakes evaluations, was created based on latent trait theory (also called item response theory). Scores given in tests created with this newer latent trait theoretical foundation are based on a different perspective than classical test creation methodology (e.g. norm referenced tests like the GORT-4). Most notably, instead of basing scores on norms within the population, the test is scored based on a continuum of the trait being examined (Mason, 2007).

### **Data Collection and Analysis**

Data collection consisted of first administering the Gray Oral Reading Test-4 form A, individually to students in the sample ( $n = 59$ ). GORT-4 examiners included trained members of the research

team, as well as research assistants who had advanced degrees in reading (minimum Master's level), and specific training in test administration. The testing environment was controlled and quiet and all testing procedures outlined in the GORT-4 examiner's manual were implemented accordingly.

After assessing individual students, GORT-4 assessment protocols were scored by the research team. Age-based scores for the following three individual constructs were calculated: reading rate, reading accuracy, and reading comprehension. In examining the GORT-4 scores for the study sample, all mean scores were more than one standard deviation below the population outcomes, as presented by the authors of the GORT-4 ( $M = 100$ ,  $\sigma = 15$ ). This is an expected finding as the present sample only included identified struggling readers. Moreover, present study standard deviations were smaller (between 12.88 and 8.39) indicating a smaller range of scores for participants than for the typical distribution of individuals (Weiderholt & Bryant, 2001). Descriptive statistics for GORT-4 scores are shown in Table 1 located at the end of the article.

After scoring GORT-4 protocols, the research team converted raw scores for individual student STAAR performance to percentage correct scores. Scores for the total STAAR test and three subscales of understanding across genres, literary text, and information text were included for purposes of descriptive understanding prior to implementation of multiple regression analysis (See Table 2 located at the end of the article). When the present study was conducted, no passing standard was set by the state, yet note all mean scores indicate

values of less than 50% correct. In contrast to relatively narrow standard deviations for the GORT-4 scores, STAAR standard deviations were large (between 13.07 and 19.75) indicating more variability in the data.

## Results

After computing descriptive statistics, a multiple regression model was created using SPSS to determine if performance on the GORT-4 was predictive of, or related to, performance on the STAAR (Field, 2009). Overall model summary findings, as well as, specific contributions of three predictor variables of comprehension, reading accuracy and reading rate from the GORT-4 were analyzed. As previous studies indicate reading rate and reading accuracy scores may be predictive of comprehension scores, the predictors of rate and accuracy were retained in addition to comprehension (Cutting & Scarborough, 2006; Keenan, Betjemann, & Olson, 2008; Wiederholt & Bryant, 2001).

When examining the correlations between the STAAR and GORT-4, no predictor was strongly or significantly associated with the outcome variable of the STAAR total score ( $r = .131$  for rate;  $r = .211$  for accuracy;  $r = .243$  for comprehension). As such, student performance on the GORT-4 (reading rate, reading accuracy; reading comprehension) cannot be used to indicate areas for reading intervention simply by analyzing performance on the STAAR. Further, findings indicated the multiple regression model (see Table 3 located at the end of the article) was not significant ( $p = .179$ ,  $\alpha < .05$ ). Thus, GORT-4 predictor variables (rate, accuracy, comprehension) did not explain STARR total scores (adjusted

as the  $R^2$  value was .035), as there was only 3.5% of the variance in STAAR outcomes. As such, there is little relationship between the ELA STAAR total score and reading as measured by the GORT-4 for the studied participants.

## Discussion

Based on the results of the current study, the GORT-4 and the STAAR do not measure reading comprehension in a similar manner and questions remain as to what the STAAR is measuring. As such, future research is warranted to determine how the STAAR measures the complex construct of reading comprehension, especially for those students most at risk for failure, including but not limited to, those students in high poverty, minority, and learning disabled groups (Baker & Johnston, 2010; Shepard, 2003). Further investigation into other potential confounding factors (SES, gender, ethnicity, etc.) influencing STAAR outcomes, beyond the GORT-4 predictors of reading comprehension, reading rate, and accuracy is also warranted.

Given the lack of relationship between the STAAR and GORT-4, the complex nature of the reading process, and the complex process of learning, STAAR ELA scores are likely influenced by various abilities and proficiencies (Waber et al., 2006). The present study shows while the STARR may somehow measure reading for middle school students, it does not measure comprehension, rate, or accuracy in the same manner as other commonly used diagnostic reading measures such as the GORT-4. This is a problem and educators should not rely solely on the STAAR test for decisions regarding instructional planning. In addition, practicing ELA middle school

educators are encouraged to use multiple formal and informal reading assessment tools (in addition to STAAR scores) to pinpoint areas of reading difficulty and plan reading intervention for individual students who struggle (Cutting & Scarborough, 2006; Hale & Fiorello, 2010).

At the policy level, the institutionalized practice of using STAAR reading scores for unilateral decision making in terms of student promotion and retention, student graduation, and school and district performance is also called into question.

The lack of relationship between STAAR outcomes and GORT-4 outcomes in the current study suggests we may not know what facets of reading the ELA STAAR measures, especially for at-risk populations. As such overreliance on STAAR as a diagnostic indicator of reading performance for students seems not only premature but potentially harmful, as unintended, negative, consequences including, but not limited to, student distress, teacher burnout, and curriculum narrowing may occur (Berliner, 2011).

**Table 1**

GORT-4 Scores

Construct	<i>M</i>	<i>SD</i>
GORT-4 Reading Comprehension	84.49	8.39
GORT-4 Reading Rate	83.73	9.45
GORT-4 Reading Accuracy	76.78	10.49

**Table 2**

STAAR Descriptive Statistics

Construct	<i>M</i>	<i>SD</i>
STAAR Total Score	47.46%	13.07
STAAR Subscale: Between Genres	48.31%	19.75
STAAR Subscale: Literary Text	46.14%	14.54
STAAR Subscale: Informational Text	46.41%	14.47

**Table 3**

Multiple Regression Summary of GORT-4 Predictors on STAAR outcome

	SS	Df	MS	F	P	R <sup>2</sup>	Adjusted R <sup>2</sup>
Regression	837.282	3	279.094	1.694	.179	.085	.035
Residual	9063.362	55	164.778				
Total	9900.644	58					

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# Beginning the Dialogue: Talking about Literature in the Teaching of Multicultural Education

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## ABSTRACT

*In higher education, multicultural education courses are often required in teacher education programs. Instructors feel a great deal of responsibility to effectively expose students to relevant issues regarding the increasingly diverse society in which we live. In this study, the instructors incorporate book discussion groups within their multicultural education course. Based on the needs evidenced by students' verbal and written commentary, the instructors identified meaningful texts that provided pedagogical strategies, allowed opportunity for students to examine their past education and family history, as well as fully described the classroom settings in which educators teach. With the increased involvement of students in the selection of meaningful texts used to guide book discussion groups, the instructors found that a greater level of connection, clarity, and understanding regarding varying cultures and diverse learners was realized by all.*

For many years, adults have congregated in their homes, libraries, church basements, and various social settings to talk about books they have enjoyed reading. Educators have realized the value of these great conversations, and have incorporated them into the classroom since the 1980s (Daniels, 2006). As a result, book clubs have been used as an interactive way for adults in graduate courses to hear various perspectives, opinions and thoughts that were not familiar (Beach and Yussen, 2011). The use of literature offers an engaging way to discuss topics people find difficult to talk about on their own.

## Context of the Story

Jennifer and Tamara were the instructor and teaching assistant of a graduate course on multicultural education during the 2011 spring semester. One of the most informative course requirements implemented during the semester that enabled this learning was that of book discussion groups. Book discussion groups provided an opportunity for students to read, reflect, and then communicate their responses to literature. Through the book discussion groups, students heard various perspectives on topics relevant to multicultural education. The authors wanted to determine if the book discussion

groups were an effective practice to use in a graduate course to encourage critical discourse.

A great deal of responsibility was felt to effectively expose students to relevant issues regarding the increasingly diverse society that we live in while allowing opportunities for debate, processing, reflection, and reconstruction of beliefs and practices to occur. Though students enrolled in the course were from a variety of cultural, ethnic, and racial backgrounds, few had previously taken the required course on multicultural education. Many who had previously completed a course on the subject stated that past courses focused mostly on issues concerning race, particularly strife and struggle between Blacks and Whites.

### **Book Discussion Groups**

Research has indicated that when adult learners talk about literature in a student-directed experience, deeper understanding of the text is evident (Addington, 2001; Beach and Yussen, 2011; Smith, 1996). Furthermore, it is also realized that the book discussion groups situated in the study are essentially the same as adult book clubs. Similar to the book clubs described by Addington (2001) who looked at book clubs in a graduate university English course, the book discussion groups in this study were student-led, not instructor-driven.

### **Theoretical Framework**

The book discussion groups were created with the understanding of how readers make meaning from text (Rosenblatt, 1978). Rosenblatt explained that each reading experience is a transaction between the

reader and the text. As each reader is unique based on his or her personal background knowledge and experiences, they respond to texts based on what he or she brings to the reading. Rosenblatt (1978) explained that readers will have a response that is either aesthetic or efferent. An aesthetic response is emotion filled, while an efferent response is one that recognizes that information is gathered. With this theoretical framework in mind, the authors designed this study to determine how the book discussion groups provided graduate university students the opportunity to make meaning from texts and respond to texts featuring diverse people and cultures.

### **Developing a Shared Understanding**

On the first evening of class, each graduate student was asked to define “multicultural education.” Once shared, the definitions proved to be both varied and surprising. Despite living in a border state and being exposed to a variety of different cultures on a daily basis, a surprisingly great deal of graduate student educators enrolled in the course did not seem to understand the importance of recognizing both race and culture. Through comments made either in class or in weekly reflective journals, it became evident that some educators believed that because they were instructing a class of diverse children, and they genuinely cared about the academic and social growth of each child, they did not hold any personal prejudices or biases that required examination or thought. Dovidio, Kawakami, and Gaertner (2000) refer to this phenomenon as “aversive racism,” a term that describes when individuals hold unacknowledged negative views toward or feelings about minority groups but ensure

that these underlying feelings are never manifested in their behavior because they truly view themselves as non-prejudiced people. Evidence of this type of thinking can be found in statements that were often heard during class, such as “I just don’t see color,” or “In my class, we are all the same. There are no differences.” Though these statements appear to be made with the best intentions, the devastating effects that this reasoning may have on students and educators alike is often not realized (Gaertner & Dovidio, 1986).

Several educational researchers, such as Banks (1984), Baratz and Baratz (1970), and Ladson-Billings (1990) agree that failing to acknowledge that differences exist and are visible in the learning environment is a negative occurrence, and can even be regarded as a covert form of racism, in which important, individual differences and diversities do exist, but the educator fails to recognize them as valid or worth noting. A few students in the multicultural education course realized the importance of acknowledging differences in race and culture, but admitted to only doing so within a specific race or culture’s federally designated month. Louise Derman-Sparks (1993) coined the term “tourist-multiculturalism” to describe this type of approach to diversity—one that merely visits a particular culture, creating an artificial exposure to varied cultures.

As today’s schools represent a microcosm of society, each is becoming an increasingly dynamic and diverse environment while in many areas the teaching profession continues to be dominated by White, middle class females (Landsman, 2001). It is imperative that educators not only examine their beliefs and thoughts about

multicultural issues, but also seriously consider what implications these beliefs or even biases may have on classroom instruction and dynamics. Biases may be evidenced in the way educators treat or address certain children, ways in which they interact with others, or materials they utilize or omit (Dovidio, Brigham, Johnson, and Gaertner 1996; Rothbart, 1996). Additionally, adults serve as role models after whom children often base their creeds, ideas, and practices (Trager & Yarrow, 1952). Therefore, allowing students to both witness and engage in critical thinking and discussion about a variety of cultures and diversities conveys the belief that it is optimal to have varying cultures, ideas, and beliefs. Further, with this exposure, children may better understand that the ultimate goal is always to gain increased understanding and to improve as an individual while maintaining an appreciation and respect for the various cultures and differences of others.

### **The Study of Book Discussion Groups**

Instead of assigning each graduate student to a specific culture, group, or area, the instructor and teaching assistant opted to list the student-developed sub-areas of multicultural education on the board in front of the class. Students were able to choose which category they wanted their book for weekly discussion groups to pertain to from the following collapsed choices: African Americans, Asians, Caucasians, Latinos, Middle Eastern, Native Americans, race in general, gays and lesbians, gender issues, mental disorders, physical disabilities, language, poverty, interracial relationships, and religion. Though not given a particular limit for how many individuals could be in each group,

students were encouraged to not only disperse themselves among the categories, but to also choose a culture or group with which they were not already greatly familiar.

### Selecting Meaningful Texts

Of the thirteen possible multicultural categories, only five areas were chosen by each of the students: race in general, African Americans, poverty, Latinos, and Caucasians. Only one of the selected groups was not explicitly related to a racial or ethnic group. The number of students electing "Caucasian" was so great; two groups had to be created for this sub-culture.

Based on the needs evidenced by students' verbal and written commentary, the instructor and teaching assistant identified three objectives to meet with each book selection: 1) to provide pedagogical strategies that assist teacher educators/trainers to begin the dialogue about the importance of seeing race and culture and using them to increase their knowledge about their own students in an effort to more effectively reach them; 2) to assist teachers in examining their past education and family histories and how they affect and/or drive instruction through the reading of selected texts; 3) to select appropriate and meaningful texts for book discussion groups that mirror the classroom settings in which educators teach.

Based on the objectives outlined by the instructor and teaching assistant, the following books were chosen to facilitate book group discussion: *The Dreamkeepers: Successful Teachers of African American Children* by Gloria Ladson-Billings, *The*

*Shame of the Nation: The Restoration of Apartheid Schooling in America* by Jonathan Kozol, *Subtractive Schooling: U.S. Mexican Youth and the Politics of Caring* by Angela Valenzuela, *Many Children Left Behind: How the No Child Left Behind Act is Damaging Our Children Our Schools* by Deborah Meier and George Wood, *White Teacher* by Vivian Paley and *A White Teacher Talks about Race* by Julie Landsman. A rationale is provided for each book choice in the appendix.

### Meetings and Discussion

Once formed, each book discussion group decided at what pace the assigned book would be read. Books could be divided into sections or chapters. As a connection activity to be completed for each section read, students were asked to write a gem (a quote from the text that was very meaningful to them), a reaction to that gem, and an action that they could take based on that gem on a 3 ½" x 5" note card. The last thirty minutes of each class meeting served as designated book group discussion time, and students used their note cards with their gems, reactions, and actions to guide discussion. To ensure that the entire class benefited from the new learning taking place in each individual book group, a representative from each group shared a brief synopsis of what their particular group discussed with the whole class weekly.

To synthesize the new insights and knowledge gained from the book group readings and discussions, each book group gave a presentation on their respective books. Presentations were held during the last two meetings of the course, and could be presented in whatever format the group decided was appropriate and effective.

Methods of presentation included power point presentations, scrapbooks, poster presentations, and oral presentations. Though the format of sharing varied, an overwhelming amount of learning that took place in each book discussion group was clearly evident. A few quotes heard during the varied presentations included, "I now see why I need to see color," and "I've learned so much through this book and being able to discuss with my colleagues...I'm going to suggest having book discussion groups at my school to my principal." Perhaps one student summarized the overall sentiment of the class best when she stated, "Multicultural education truly is education for all. It does not discriminate or exclude. I know that now as a result of this course and this group."

### **Implications of the study**

Through the utilization of book discussion groups, graduate students in this multicultural education course were exposed to various issues often involved in the effective teaching of diverse learners, were able to reflect upon their own

teaching beliefs and practices, and revise those that were not providing optimal opportunities for growth and success for all students in the classroom environment. Book discussion groups will continue to serve as an integral component of the existing syllabus for the multicultural course provided at the university; however, the authors realize that one component that would be beneficial is allowing students to select their own books based on their backgrounds and interests and considering suggestions for relevant texts that students may have previously encountered. When graduate students are allowed to have their own choice in selecting books, research has found that the students were more engaged and motivated to participate (Beach and Youssein, 2011; Daniels, 2006). With the increased involvement of students in the selection of meaningful texts used to guide book discussion groups, it is hoped that there is a greater level of connection, clarity, and understanding regarding varying cultures and diverse learners may be realized by all future graduate students enrolled in the coursework.

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## Appendix

*The Shame of the Nation: The Restoration of Apartheid Schooling in America* by Jonathan Kozol (2005). Kozol takes a critical, honest, and effective survey of many disturbing trends that are occurring in America's increasingly inequitable school systems.

*The Dreamkeepers: Successful Teachers of African American Children* by Gloria Ladson-Billings (1994). Through personal reflection and accounts of other effective teachers' practices, the author details approaches and strategies that, if properly implemented, may help African American children achieve greater success in the school environment.

*Many Children Left Behind: How the No Child Left Behind Act is Damaging Our Children and Our Schools* by Deborah Meier and George Wood (2004). The No Child Left Behind Act has undoubtedly changed the ways in which teachers, districts, and individual states instruct and assess students. This work highlights some of the most profound changes that have occurred as a result of the legislation, and more importantly details what affect these changes are having on America's students and their learning.

*White Teacher* by Vivian Paley (1979). A White teacher details the understandings she gained from her teaching experience and is able to effectively examine the privilege and promise that is unfairly afforded to White children. *White Teacher* is not written to provide insights on how to effectively instruct the Caucasian population, but is written from the perspective of a Caucasian woman, which allows the reader to either identify with or gain insights from this perspective.

*A White Teacher Talks about Race* by Julie Landsman (2001). A Caucasian teacher attempting to cope with personal bias and prejudice toward certain minority groups as a result of a horrific experience she endured earlier in her life finds healing and hope in her experiences as a teacher of diverse children. Like the work *White Teacher*, *A White Teacher Talks about Race* is not a book meant to provide insights into the lives of White children, but is effectively written from the perspective of a White educator in order to give the reader an accurate perspective of what it is like to teach diverse learners as a Caucasian individual.

*Subtractive Schooling: U.S. Mexican Youth and the Politics of Caring* by Angela Valenzuela (1999). Living in a border state, this book provides insights into the struggles and complications that Mexican-American youth face in today's school environments.



## Concept Maps and Informational Read-Alouds: Strengthening both Science and Reading for Elementary Students

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### Abstract

*This quasi-experimental study compared the effects of concept mapping and teacher generated questioning on students' organization and retention of science knowledge when used along with interactive informational read-alouds. Fifty-eight third grade students completed an eight-day unit regarding "soil formation." Students who participated in concept mapping scored significantly higher on a test of relational vocabulary, identification of key ideas and written expression than students who participated in traditional teacher questioning.*

Proficient skills in science and reading are prerequisites to be productive members of society. Individuals must be able to use scientific processes in everyday decision-making and must possess the scientific background knowledge to make sound decisions (National Science Standards [NSS], 1996). In addition, individuals must have the literacy tools to read and comprehend informational articles about current scientific topics that affect their lives (e.g. salmonella, cancer research) (Draper, 2011). Moreover, many individuals will have roles in society that require science and literacy skills including teachers, engineers, scientists, and researchers (National Standards, 1996). However, current instructional practices, in which reading and content instruction are typically separated, often leave students unable to handle the more challenging demands of content material (Shanahan & Shanahan, 2008).

Fortunately, there have been promising instructional practices shown to benefit science and reading instruction including:

- integrating science and literacy (Pearson, Moje & Greenleaf, 2010);
- incorporating informational text (using science trade books (Smolkin, McTigue, Donovan & Coleman, 2008);
- using informational interactive read-alouds (Smolkin & Donovan, 2001);
- the use of graphic organizers specifically concept maps (Oliver, 2009);
- and teacher questioning (Heilman, Blair & Rupley, 2002).

But little or no research has combined these methods to examine its effect on student learning. The present study examined how the use of interactive read-alouds using science trade books with concept mapping and/or questioning affected elementary

students' organization and retention of *different types of science knowledge*.

### **Integration of Science and Literacy is Not a New Concept**

The integration of reading and science is not a new concept. In fact, scientists have integrated the two for centuries (Pearson, Moje, Greenleaf, 2010). To help students to experience science in its true state, then teachers must provide a learning environment that promotes the integration of science and literacy.

With the explosion of scientific information from salmonella illnesses (Draper, 2011) to cloning (Rupley & Slough 2011), there has never been such a crucial time for one to be a "scientifically literate citizen" (Fang & Wei, 2010).

The National Science Education Standards define science literacy as the following:

Scientific literacy means that a person can ask, find, or determine answers to questions derived from curiosity about everyday experiences. It means that a person has the ability to describe, explain, and predict natural phenomena. Scientific literacy entails being able to read with understanding articles about science in the popular press and to engage in social conversation about the validity of the conclusions. Scientific literacy implies that person can identify scientific issues underlying national and local

decisions and express positions that are scientifically and technologically informed. A literate citizen should be able to evaluate the quality of scientific information on the basis of the sources and the methods used to generate it. Scientific literacy also implies the capacity to pose and evaluate arguments based on evidence and to apply conclusions from such arguments appropriately (NSS, 1996, pp. 2).

As evidenced above, a key factor in the preceding definition is the need for literacy skills. One must be able to read and most importantly understand text, articles, and journals to learn about scientific phenomena. Scientific literacy also implies that one must be able to write and communicate effectively to make informed decisions. Accordingly, researchers have suggested that literacy is an integral part of learning science (Shanahan & Shanahan, 2008).

### **The Importance of Incorporating Informational Text**

Incorporating informational text is not an option but a necessity for teachers. By the time students reach sixth grade, 75% of their reading will be from informational texts (Moss, 2005). In addition, many of their assessments by grade four will require them to understand and comprehend informational text. For example, 50% of the fourth grade National Assessment of Educational Progress, (NAEP) contained informational text (Moss, 2005).

It is evident that students need early exposure to informational text to help them prepare for later grade levels and the expectations of the College and Career Readiness Standards. Duke (2000) brought awareness to the educational community about the importance of informational text as well as the scarcity of informational text in the primary grades. In her landmark study that shed light on the use of instructional text in the primary grades, she investigated the time spent with informational text and found only 3.6 minutes was the average time spent per day on this genre. Jeong, Gaffney & Choi (2010) extended Duke's study with grades 2-4. They found consistent results with one minute spent on instructional text in grade 1 with an increase to only 16 minutes in grades 3 and 4.

It has been suggested that the scarcity of informational text may be associated with the decline in reading achievement after third grade (Chall, Jacobs & Baldwin, 1990; Ness, 2011;). This decline has also been referred to as the "fourth-grade slump" (Jeong, Gaffney, Choi, 2010). Around fourth grade, there is an increase of informational text. Some fourth graders are unprepared to comprehend this informational text and, therefore, experience a decrease in reading achievement (Ness, 2011). With this evidence, there is an even stronger need for primary teachers to incorporate informational text in their curriculum.

## **Instructional Strategies Used in this Study**

### **Informational Interactive Read-Alouds**

Reading aloud in both homes and classrooms is a widespread practice (Beck & McKeown, 2001) that has shown to be beneficial to learning (Morrison & Wlodarczyk, 2009). The report *Becoming a Nation of Readers* (Anderson, Hiebert, Wilkinson, & Scott, 1985) concluded that "the single most important activity for building the knowledge required for eventual success in reading is reading aloud to children" (p. 33). Recently, there has been an increase in intentionally and purposefully combining reading aloud of informational texts with guided conversation or discussion, also referred to as "informational interactive read-alouds".

An informational interactive read-aloud is a multifaceted instructional technique in which a teacher models reading thought processes while engaging students in discussion through sharing and posing questions (Beck & McKeown, 2001; Smolkin & Donovan, 2003;). When modeling, teachers "think aloud" to reveal reading strategies that proficient readers use in reading and understanding informational text including "fix up" strategies when comprehension breaks down (Loxterman, Beck, McKeown, 1994). These metacognitive strategies are essential to learning because they allow learners to assess their own level of comprehension and adjust strategies as needed (Oster, 2001).

Another critical component of interactive read-alouds is the facilitation

of dialogic discussion encouraging students to participate in a collaborative discussion (Reznitskaya, 2012). As opposed to traditional read-alouds in which the teacher has sole authority, a dialogic discussion is unique because authority is shared among the students and the teacher encouraging students to discuss pose questions share their ideas and examine others' viewpoints regarding the text (Reznitskaya, 2012). In addition, students are provided an opportunity to make connections with the text. Through this cognitive process, a student makes a connection to self, other texts, or to the world (Harvey & Goudvis, 2007). Text may have different meanings for different individuals because each reader brings his or her own background knowledge and personal experiences that shape the meaning of the text (Rosenblatt, 1978). Rosenblatt (1978) proposed a "transactional view" of reading in which the reader transacts with the text to make meaning (Morrison & Wlodarczyk, 2009; Rosenblatt, 1978). Not only do students have an opportunity to discuss and deepen their understanding of complex science concepts, discussion provides a platform for minimizing students' misconceptions (through teachers' assessment) and increasing vocabulary development (Leung, 2008).

### **Graphic Organizers and Concept Mapping**

Graphic organizers are a literacy strategy tool shown to benefit students in learning content (Katayama & Robinson, 2000). By organizing information and showing relationships between concepts through the use of

arrows, lines and text boxes, graphic organizers aid students in learning from text in multiple ways (Hall, Kent, McCully, Davis & Wanzek, 2013). The visual structure helps students organize information and make relevant connections (Katayama & Robinson, 2000). Translating information from a text format to a graphic organizer can deepen the learning process for the reader (Nesbit & Adesope, 2006).

This study focused on the use of the *concept map*, created by Novak (1990) as a tool to help students organize ideas and thoughts especially in the area of science. In using a concept map, a teacher or student selects a certain topic to be mapped (Novak & Gowin, 1984). As shown in Figure 1, the students have an opportunity to identify key concepts and then draw lines to connect and show relationships between concepts. Linking words or phrases are used to define these connections. A particular advantage to concept mapping is that it can be used as a pre-reading, during reading and/or a post-reading activity.

### **Teacher Questioning**

A common and very traditional approach to teaching and learning is teacher-generated questioning which has proven to have positive effects on students' text comprehension (2007; Feldt, Feldt, & Kilburg, 2002). Among the benefits is the promotion of student understanding by focusing attention of the important details. In addition, this instructional strategy can be beneficial in clarifying meaning as well as minimizing students' misinterpretation of information (Heilman, Blair & Rupley,

2002). Questioning can also aid in propelling prior knowledge by activating students' experiential and conceptual backgrounds (Heilman et al., 2002) promoting deep processing of information (McKeown & Beck, 1993).

But yet, there have been several criticisms to using teacher questioning as an instructional method (Feldt, et al., 2002). First, students may search for important ideas to memorize instead of making connections and increasing relational knowledge (Cook & Mayer, 1983). Secondly, some of the questions that may be used, especially publisher-provided, fail to promote higher cognitive levels (Feldt, et al., 2002). Although effective teacher questioning has also been shown to promote students' understanding (Heisey & Kucan, 2010; Lloyd, 2004), most questions are not designed to promote connections between ideas in the same manner as concept mapping.

## **Methodology**

### **Participants**

The participants were third grade students from an urban elementary school in the northwest region of the United States. There were 29 participants in the treatment group and 29 participants in the comparison group. Both groups participated in an eight-day study over the scientific topic of soil formation.

Both groups participated in an informational interactive read-aloud. The students in the treatment group participated in a concept mapping activity while participants in the

comparison group participated in a teacher-questioning activity. Both activities were conducted before and after the informational interactive read-aloud.

### **Treatment Group: Concept Mapping**

Used as a pre-reading activity and to assess prior knowledge, participants in the treatment group created a concept map on what they already knew about the concept being taught for the day (e.g. soil formation). Then students had an opportunity to share their concept map with their classmates, followed by the creation of a class constructed concept map. As a post-reading activity, students created another concept map as shown in Figure 2 on what they learned during the lesson, again followed by an opportunity to share their map with their classmates.

### **Comparison Group: Teacher Questioning**

Since teacher questioning is commonly used in traditional teaching, it was the strategy used for the comparison group. As a pre-reading strategy and to assess prior knowledge, the teacher posed several questions in regards to the topic being discussed for the day (e.g. soil formation). For example, one of the questions posed by the teacher on the first day of the lesson was "What do you know about soil?" Students had an opportunity to write down their answers and share their responses with the classmates. The teacher posted the students' answers on the board. As a post-reading activity, the teacher posed questions regarding the lesson. For

example one of the questions posed by the teacher was “What is the purpose of soil?” Students had an opportunity to write down their answers followed by an opportunity to share their responses with the class as is a common classroom practice.

### **Both Groups: Informational Interactive Read-Aloud**

Participants in both the treatment and the comparison group participated in a series of informational interactive read-alouds conducted by the science teacher. The teacher used a science trade book focusing on the specific concept they were learning for that day. The trade books were selected by a group of third grade teachers based on content accuracy and aesthetic appeal. During the informational interactive read-aloud, the science teacher modeled her reading process while engaging students in dialogic discussion regarding the scientific text.

### **Assessments**

Pre-test, post-test and delayed post-test were developed by the researchers. Information about the concept of soil formation was measured using the following types of assessments:

- a) relational vocabulary assessment (measuring relational knowledge);
- b) vocabulary matching assessment (measuring individual word knowledge);
- c) multiple-choice comprehension assessment (measuring students’ ability to identify key ideas; and
- d) a writing comprehension assessment (measuring students’ clarity of written expression).

The relational vocabulary assessment required students to find the underlying similarity between a set of concepts whereas the matching vocabulary test relied on simple definitions. The pre-test was administered a week before the study. The post-test was completed the day after the study was completed and the delayed post-test was administered five days after the completion of the instructional unit.

### **Data Analysis**

Analysis indicated that the treatment and comparison group performed comparable on the pre-test indicating that there was not a significant difference between the background knowledge of participants in both groups. As shown in Table 2 located at the end of the article, the treatment group scored significantly higher than the comparison group on the post-and delayed post-tests on three of the four assessments including relational vocabulary (measuring relational knowledge), multiple choice (measuring ability to identify key ideas), and the writing assessment (measuring clarity of written expression). These findings appear to be quite logical due to the goals cognitive strategies involved in completing concept mapping procedures. Surprisingly, there was not a significant difference in the performance of the treatment group and comparison group on matching vocabulary.

It is also important to highlight that although the treatment group outperformed the comparison group, both groups showed significant growth.

As shown in Table 3 located at the end of the article, the treatment group showed significant growth between the pre-test and post-test on all four assessments specifically in relational knowledge (as measured by the relational vocabulary assessment), ability to identify key ideas (as measured by the multiple choice assessment), clarity of written expression and use domain knowledge (as measured by the writing assessment), and individual word knowledge (as measured by the vocabulary matching assessment). In addition, there was not a significant difference between their performance on the post-test and on the delayed post-test (given five days later) on all four assessments.

As shown in Table 4 located at the end of the article, the comparison group showed significant growth between the pre-test and post-test on all four assessments. It is important to note that there was not a significant difference between their performance on the post-test and delayed post-test on the writing assessment. However, there was a significant difference on the relational vocabulary assessment, multiple-choice assessment and matching vocabulary assessment. This indicates that participants in the comparison group were able to retain information in written expression but not in relational vocabulary knowledge, identifying key ideas and individual word knowledge. Data analysis of the specific types of science knowledge assessed is highlighted in the next sections.

## Discussion of Results

### Relational Knowledge

Relational knowledge is being able to identify relationships between concepts as well as how they are related (DiCecco & Gleason, 2002). Based on constructivist ideas, Novak designed the concept map as a tool to show students' understanding and meaning of concepts in their own cognitive structure (Novak & Gowin, 1984). Concept maps have been shown to be beneficial due to its visuospatial elements. It is logical then, that students who used concept mapping increased their relational knowledge. This graphical instructional tool features *cross-links* that highlight relationships or links between concepts in different domains of the concept map, signaling hierarchical relationships (or other types of relationships) that can be immediately perceived by the student (Novak & Canas, 2006).

### Recall of Key Ideas

The data also revealed that concept mapping was beneficial in helping students recall key ideas as measured by a multiple-choice assessment. This finding is consistent with dual coding theory suggesting that storing information in two codes, verbal and nonverbal (e.g., visual), may aid in increasing memory or recall of information because it provides two pathways to retrieve it from long-term memory (Paivio, 1986; Paivio & Csapo, 1973; Sadoski, 2005; Vekiri, 2002). Dual coding theory can be applied to concept mapping because the graphical organizers uses visual graphics (shapes) as well as text proving advantageous for memory.

### **Written Expression**

The students in this study using concept mapping scored higher on tests of written expression. This is consistent with findings from DiCecco and Gleason (2002) who found that students who used graphic organizers for learning science also scored higher on written essays. One of the most critical processes in writing is the organization of ideas. According to Novak and Gowin (1984), graphic organizers such as concept maps are powerful pedagogical tools because they allow learners to visualize concepts as well as the hierarchical relationships between them which could result in clearly articulated and organized written essays. In summary, the use of graphic organizers, such as concepts maps, can be beneficial for students in the area of writing combining their ability to apply newly acquired knowledge as well as express their relational knowledge in a coherent essay.

### **Individual Word Learning**

In addition to discussing the significant differences between the groups, it is equally critical to discuss areas in which they did not differ in performance. Specifically, there was not a significant difference between the treatment group and the comparison group on individual word learning, as measured by the matching vocabulary assessment. Of interest, in the analysis of graphic organizer research, few studies have used the matching format as an assessment. This may be due to the fact that the type of learning theoretically promoted by concept maps (relationships) (Novak & Canas, 2006), is

not easily captured by such a format. Therefore, there may be other literacy instructional methods that might be more beneficial for individual word learning.

### **Retaining Information**

Finally, an important feature in this experimental design was the use of immediate and delayed post-testing. The treatment group's gains in relational vocabulary, identifying key ideas, and written expression were maintained after five days as measured in the delayed testing indicating that concept mapping facilitates learning as well as supports the retention of the information. According to Robinson (1998), one of the limitations in past research on graphic organizers is the limited use of assessing students in a delayed measurement. However, to measure long term learning, delayed measures are more important than immediate recall.

As expected, all groups performed lower in the delayed post-test than the immediate post-tests. However, the amount of loss differed between the treatment group and comparison group. On all of the four assessments, the treatment group had a lower point decrease in the mean average between the time-points of the post-test and the delayed post-test indicating that the treatment group demonstrated higher retention than the comparison group.

### **Limitations**

The study had several limitations that might have affected the statistical outcome of the data. A longer



treatment period would provide students with more opportunities to further develop their skills associated with the use of concept mapping with additional topics and concepts in science. It would also be interesting to see if levels of differences between the treatment group and the comparison group would increase, decrease or sustain. Next, it would have been ideal if there were a longer period between the post-test and delayed post-test. However, due to constraints of the school calendar, there was only five days between the post-test and delayed post-test. It would have been ideal if there were a longer period between the post-test and delayed post-test.

## Implications

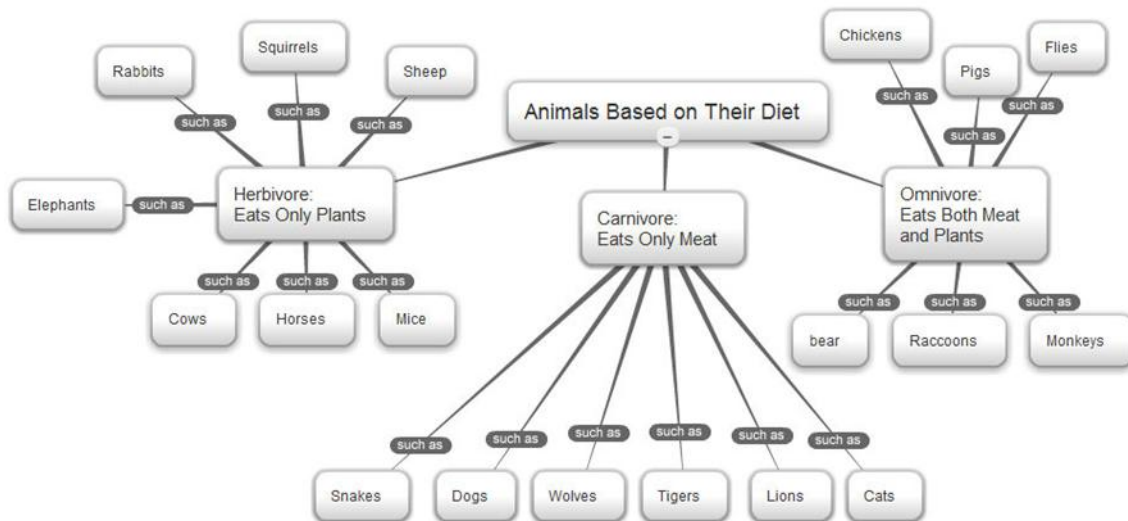
While moderate in scale, the results of this study indicated that concept mapping coupled with interactive informational read-alouds could be an effective strategy in learning science concepts. The treatment group scored higher on three of the four assessments. This finding indicates that concept mapping may be suited to promote certain types of knowledge including identifying key ideas, recalling information and written expression. The use of concept mapping did not take more time than answering comprehension questions, but was more effective on three of four assessments, in both immediate and delayed post-testing. Using concept maps with a set of related texts, or text set facilitated students' connections across texts and focus on the underlying science concepts. Additionally, the discourse and interaction between

students when creating the concept maps may have been a rich source of learning.

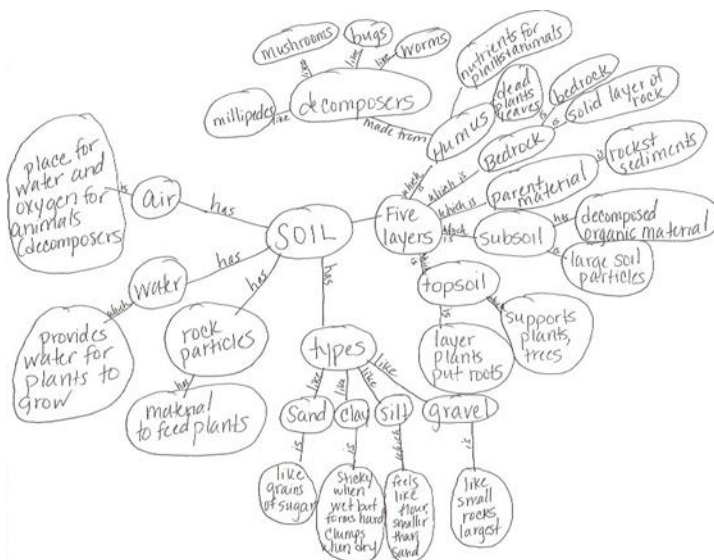
## Technology Applications

The beauty about concept mapping is that it can be done before, during and after reading. In addition, concept mapping can be incorporated into all content areas. Recently, there has been a plethora of new technology applications featuring graphic organizers. In fact, these applications have opened the door for collaborative opportunities providing a platform for students to work on their project in real-time in partners or even groups. We have highlighted several applications in Table 5 located at the end of the article. Figure 1 is an example of a concept map using Bubbl.us. Not only will this increase their technology skills in this Digital Age, it will increase their knowledge in learning science concepts.

**Figure 1. Example of Concept Map**



**Figure 2. Student's Concept Map on Soil**



**Table 1: Science Trade Books Used for Informational Interactive Read-alouds**

Title & Author	Topic Content
<i>Sand and Soil: Earth's Building Blocks</i> Beth Gurney	In this book, Gurney provides an overview of soil including the composition of soil and types of soil layers.
<i>Without Soil</i> Ashley Chase Marco Bravo	In <i>Without Soil</i> , Chase and Bravo discuss the importance of soil.
<i>Dirt</i> Nancy Goodman	In this text, Goodman discusses sand, silt, erosion and humus. The book provides a glossary, hands-on activities and fun facts.
<i>Soil Erosion and How to Prevent It</i> Natalie Hyde	Hyde helps students understand the impact of erosion on real life. The author describes the processes of weathering, erosion, and deposition. It also provides ways to prevent erosion.
<i>Erosion</i> Becky Olien	In <i>Erosion</i> , Olien discusses the different types of erosions. Natural landmarks are used as examples. The author also discusses how to help fight erosion.
<i>Minerals</i> Rebecca Faulkner	In this book, Faulkner explains how minerals form. The author also discusses the types of minerals
<i>Wiggling Worms at Work</i> Wendy Pfeffer	An addition to a popular science series explores how the cycle of life is enriched by the way worms live, eat, and work in the underground environment
<i>Composting: Nature's Recyclers</i> Michael Koontz	As an overview of composting, Koontz describes how a compost heap works, what it needs to work well, and what plants, insects, and bacteria help to break down the organic refuse found in one.

**Table 2: Comparison of the Performance of the Treatment and Comparison Group**

Test	Group	Pre-Test			Post-Test			Delayed Post-Test		
		M	SD	$\rho$	M	SD	$\rho$	M	SD	$\rho$
RV	Treatment	9.31	6.50	.676	93.80	9.03	.001	88.97	7.24	<.001
	Comparison	10.00	5.98		82.76	14.12		77.24	11.30	
MC	Treatment	43.79	13.47	.925	90.00	10.00	.001	86.20	11.15	<.001
	Comparison	43.48	14.21		78.87	13.98		71.04	16.11	
WA	Treatment	24.14	8.14	.326	76.72	17.59	.001	74.14	17.01	<.001
	Comparison	25.86	4.64		62.93	25.55		54.31	24.15	
MV	Treatment	17.59	13.54	.854	84.14	13.50	.295	81.03	14.23	.082
	Comparison	18.28	14.90		79.66	18.42		73.45	18.18	

Note. RV=Relational Vocabulary. MC=Multiple-Choice. WA=Writing Assessment. MV=Matching Vocabulary.

**Table 3: Growth of Performance for the Treatment Group**

	Pre-Test	Post-Test	$\rho$	Delayed Post-Test	$\rho$
Relational Vocabulary	9.31	93.80	<.001	88.97	.002
Multiple-Choice	43.79	90.00	<.001	86.20	.008
Written Assessment	24.14	76.72	<.001	74.14	.795
Matching Vocabulary	17.59	84.14	<.001	81.03	.158

**Table 4: Growth of Performance for the Comparison Group**

	Pre-Test	Post-Test	P	Delayed Post-Test	$\rho$
Relational Vocabulary	10.00	82.76	<.001	77.24	<.001
Multiple-Choice	43.48	78.97	<.001	71.04	<.001
Written Assessment	25.86	62.93	<.001	54.31	.023
Matching Vocabulary	18.28	79.66	<.001	73.45	<.001

**Table 5: Suggested Applications for Concept Mapping**

Technology Application	Features
Popplet <a href="http://popplet.com">http://popplet.com</a>	Popplet allows students to display ideas using graphic organizers (concept maps, timelines). This is a great tool for students to help them organize science concepts. Want to increase collaboration in your classroom? Using Popplet, students can collaborate in real-time opening up a world of teamwork possibilities.
Bubbl.us <a href="https://bubbl.us">https://bubbl.us</a>	Very similar to Popplet, Bubbl.us( <a href="https://bubbl.us">https://bubbl.us</a> ) also has the capability of creating and sharing graphic organizers with others. A neat feature in Bubbl.us is that students can also export their graphic organizers in Powerpoints and other type of documents. Bubbl.us also features a plethora of types of graphic organizers in different shapes and colors that will spark your students' interest.
Educreations <a href="http://www.educreations.com">http://www.educreations.com</a>	Though not specifically a graphic organizer tool, Educreations is an interactive whiteboard providing an opportunity for students to create a variety of organization tools such as concept maps. Students will love this versatile application because it offers endless possibilities.

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## Engaging Readers, Increasing Comprehension, and Building Skills: The Power of Patterned Books

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### Abstract

*Reading comprehension requires thoughtful interactions between the reader, the text, and the author. The author may assist the reader in building meaning by creating purposefully crafted conversations that are organized into predictable patterns also known as patterned books. In this article, three predictable patterns found within children's text are discussed.*

Reading comprehension, also notably referred to as “the essence of reading” (Durkin, 1993), is an active and multifaceted-cognitive process that requires intentional and thoughtful interactions between the reader, the text, and the author (National Institute of Child Health and Human Development [NICHD], 2000; Rosenblatt, 1978/1994). Not only do these three sources contribute to the meaning, but the context in which the interaction takes place also influences the transaction that occurs (McKeown, Beck, & Blake, 2009). This transaction has been described as a partnership — one in which the reader supplies prior knowledge and actively engages with the text and the author (Zipprich, Grace, & Grote-Garcia, 2009).

The author may assist the reader with building meaning by creating purposefully crafted conversations that are organized in predictable patterns also known as patterned books. Patterned books engage readers on

various levels because they “contain a repeated linguistic or story grammar pattern that English language learners (ELL) or elementary students with learning disabilities (LD) in areas of reading can use to support their reading” (Zipprich, Grace, & Grote-Garcia, 2009 p. 294). Patterned books have also been reported to be effective instructional tools for students who are autistic and are often challenged with language and integrating aspects of communication to gain meaning in social situations (Gately, 2008). This increased support is often found within patterned books.

In this article, three predictable patterns found within children's text are discussed. Popular titles and classroom activities are given as examples. The featured texts are recognized by the International Reading Association (IRA, 2011, 2012, & 2013) as books “children really enjoy reading” (2012, p.1) and they can be found on IRA's 2011, 2012, or 2013 *Children's Choice Reading List*.

Each of these lists reflects the reading choices of 12,500 school children from different regions of the United States (IRA, 2013).

### **Patterned Books as Instructional Tools**

Readers who comprehend well use a number of strategies such as activating prior knowledge, generating questions, drawing inferences, creating summaries, and identifying the text structure (NICHD, 2000; Pressley, 2000; Smolkin & Donovan, 2002). In fact, research from the past thirty-five years suggests that comprehension is enhanced when the text is organized into a well-known structure (Kintsch, Mandel, & Kozminsky, 1977; Mandler & Johnson, 1977; Thorndyke, 1977). Zipprich, Grace, and Grote-Garcia (2009), reminds us that “the idea behind instruction with patterned books is that the hierarchical components represent frames or patterns that readers can use to store information in long-term memory, thus increasing comprehension” (p. 294). For example, Wilson (2011) uses rhyme to craft a predictable conversation that features a fluent rhythm in *Bear’s Loose Tooth*—

From the cave in the forest came a  
MUNCH, MUNCH, CRUNCH as Bear  
and his friends all nibbled on their  
lunch. Bear savored every bite. He  
gulped and he gobbled. Then there  
in his mouth something wiggled, and  
it wobbled” (Wilson, 2011, p. 1-2).

This purposefully crafted conversation, or rhythmic pattern, is continued throughout the book and serves as a scaffolding device that supports the

reader with word identification, fluency, and ultimately comprehension. Readers of *Bear’s Loose Tooth* are further guided by the circular pattern in which the author has structured the conversation. This circular pattern includes Bear’s tooth becoming loose, his various friends attempting to assist him, and then finally losing his tooth. In addition, Bear’s adventure returns full circle when, “he woke in the morning and found the sweet treat. Bear’s friends came for breakfast. They sat down to eat. Bear gulped and he gobbled, and he felt something wobble....Uh-oh! Bear’s loose tooth!” (Wilson, 2011, p.29-30). Readers of *Bear’s Loose Tooth* are left to conclude that the spiraling story will take place once again.

Are patterned texts helpful learning tools for all students, including those at-risk or who have learning disabilities? The research says, yes. In an evaluation of multiple instructional programs, Williams (2005) suggests that “at risk children in the primary grades can achieve gains in comprehension, including the ability to transfer what they have learned to novel texts, when they are given highly structured and explicit instruction that focuses on text structure” (p. 6). Similar findings are reported in a meta-analysis of strategies used to improve the reading comprehension skills of students with learning disabilities. In the research findings, Sencibaugh (2007) reports that, two important findings emerged from the synthesis: (a) auditory/ language dependent strategies have a greater impact on the reading comprehension skills of students with learning disabilities compared to visually

dependent strategies and (b) questioning strategies involving self-instruction and paragraph restatements along with text-structure-based strategies yield the most significant outcomes” (p. 6).

Not only do pattern books engage readers and increase comprehension, the interaction with the text also assist in building necessary skills such as phonological awareness and reading fluency. This is because the repeated linguistic patterns found in many patterned books provide opportunities for readers to play with language. For example, rhyming books such as *Bear’s Loose Tooth* (Wilson, 2011) offer playful opportunities for children to hear the rhythm and prosody of language. The ability to recognize and manipulate the rhythm and sounds of language, also known as phonological awareness, is an early literacy skill that is necessary for reading success (NICHD, 2000). Likewise, prosody of language (the use of expression, phrasing, and intonation to convey meaning) has a symbiotic relationship with reading engagement, comprehension, and fluency. It is through these playful opportunities that a deeper understanding of reading fluently can be experienced. Pikulski and Chard (2005) argue that

reading words, particularly reading them fluently, is depended on familiarity with them in their oral form. If the syntactic and meaning aspects of the word are to be activated, they must be part of what the reader knows through oral language development (p. 514).

These forms of play are significant factors for an emerging comprehension in young readers. For many emergent readers, fluency relies on the multiple exposures to appropriate text structures and consistent interactive opportunities to connect the printed word with their understanding of the role of oral language. Children are experienced at using “interactive play” at an early age to build an understanding of “world” and life stories through pretending and inventing (Dooley, 2011, p. 175). Evolving this schema into literary play with the text is a logical continuation of a readers early literacy experiences.

### Three Common Text Patterns

In this section, the three predictable patterns of circle-tales, rhyming text, and repetitious stories are described. In addition, popular titles and classroom activities are explored for each pattern. The featured texts are also featured on IRA’s 2011, 2012, or 2013 *Children’s Choice Reading List* and reflect the reading choices of 12,500 school children from different regions of the United States (IRA, 2013).

#### Circle-tale Patterned Books

Circle-tale patterned books are typically adventurous stories in which, “the main character or characters leave from a starting point and go off on a great adventure...[which,] terminates back at the original origin” (Zipprich, Grote-Garcia, & Cummins, 2007). Below is a list of the circle-tale patterned books that were included in IRA’s 2011, 2012, and 2013 *Children’s Choice Reading Lists*.

## 2011

- Litwin, E. (2010). *Pete the cat: I love my white shoes*. New York, NY: HarperCollins Publishers.
- Willems, M. (2010). *City dog, country frog*. New York, NY: Hyperion.

## 2012

- Bliss, H. (2011). *Bailey*. New York, NY: Scholastic Press.
- Kann, V. (2011). *Silverlicious*. New York, NY: HarperCollins Publishers.
- Long, L. (2011). *Otis and the tornado*. New York, NY: Philomel.
- Numeroff, L.J. (2011). *If you give a dog a donut*. New York, NY: HarperCollins Publishers.
- Wilson, K. (2011). *Bear's loose tooth*. New York, NY: Margaret K. McElderry Books

## 2013

- Stower, A. (2012). *Silly doggy!* New York, NY: Orchard Books
- Willems, M. (2012). *The duckling gets a cookie?* New York, NY: Hyperion.

Readers of circle-tale patterned books can increase their recalling of story events by participating in activities that explicitly draw their attention to the story structure. For example, *Silverlicious* (Kann, 2011) tells the story of a young girl named Pinkalicious, who has lost her sweet tooth. With great concern for her inability to taste sweets, Pinkalicious writes a letter to the Tooth Fairy requesting help. As a clever twist to the story, Kann creates a chain of responses from the Cupid, the Easter Bunny, and a Christmas Elf. Finally when the Tooth Fairy responds to Pinkalicious' request, the story returns

full circle and Pinkalicious discovers the source of true sweetness.

For this story and other circle-tales, a linear timeline does not accurately reflect the story structure. Instead, consider creating a retelling that is circular in nature with a "timecircle" (creatively named by a second-grade reader). Timecircles assist readers with rebuilding the story events in circular patterns to retell the rounded structure and to explore the author's purpose for writing in this pattern. Figure 1 provides an example of a timecircle for *Silverlicious*.

Analyzing the circular structure of the text can lead readers to build a deeper understanding of the character's journey. In this particular text, Kann (2011) has Pinkalicious return to the onset of her problem to emphasize that the answer to her problem rested within her, even at the beginning of the story, and throughout each story event. Kann did not explicitly state this message; instead, the circular structure guides the reader in inferring it. Circular text patterns play a very important role in creating deeper messages within stories.

### Rhyming Patterned Books

Rhyming patterned books provide opportunities for children to hear the rhythm of language. As children gain this ability, they also begin to develop phonemic awareness — the ability to take notice of, recognize, and manipulate the individual sounds of speech. Phonemic awareness and letter knowledge are the "two best school-entry predictors of how well children

will learn to read during the first 2 years of instruction” (NICHD, 2000, p. 7). A list of the rhyming books featured on IRA’s 2011, 2012, and 2013 *Children’s Choice Reading Lists* is provided.

#### 2011

- Litwin, E. (2010). *Pete the cat: I love my white shoes*. New York, NY: HarperCollins Publishers.

#### 2012

- Beaumont, K. (2011). *Shoe-la-la!* New York, NY: Scholastic Press.
- Litwin, E. (2011). *Pete the cat: Rocking in my school shoes*. New York, NY: HarperCollins Publishers.
- Wilson, K. (2011). *Bear’s loose tooth*. New York, NY: Margaret K. McElderry Books.

#### 2013

- Rosenthal, A.K. (2011). *Plant a kiss*. New York, NY: HarperCollins Publishers.
- Schwartz, C.R. (2012). *The three ninja pigs*. New York, NY: Putnam Juvenile.

Rhyming patterned books naturally guide readers to read with rhythm, phrasing, and expression. Therefore, they are great tools for fluency instruction. For example, in *Pete the Cat: Rocking in my School Shoes* (2011) author Litwin introduces readers to a rhythmic beat on the very first page — “Here comes Pete strolling down the street, rocking red shoes on his four furry feet” (Litwin, 2011, p. 1). This rhythmic pattern provides a guide for chunking meaningful phrases and encourages the reader to engage in increased expression.

Not only do rhyming patterned books encourage readers to read with greater fluency, but they can also assist in word recognition because rhyming patterned books provide opportunities to practice applying multiple cueing systems. For example, if the teacher were to read “here comes Pete strolling down the ...” (Litwin, 2011, p.1), listeners would use the rhythmic pattern, syntactic structure of the sentence, and the semantic evidence of the story to generate the word, “street”. This activity reinforces the idea that skilled readers depend on a variety of cueing systems while interacting with the text and the author.

#### **Repetitious Patterned Books**

Repeated linguistic patterns and repetitive story events assist readers with predicting subsequent words, phrases, sentences, or even story events. They also offer opportunities for developing readers to engage in familiar dialogue. Consequently, repetitious patterned books “are manageable for emergent readers, struggling readers, and ELL students” (Zipprich, Grote-Garcia, & Cummins, 2007). A list of the repetitious patterned books from IRA’s 2011, 2012, and 2013 *Children’s Choice Reading List* is provided below.

#### 2011

- Willems, M. (2010). *City dog, country frog*. New York, NY: Hyperion.

#### 2012

- Litwin, E. (2010). *Pete the cat: I love my white shoes*. New York, NY: HarperCollins Publishers.

2013

- Litwin, E. (2012). *Pete the cat and his four groovy buttons*. New York, NY: HarperCollins Publishers.

In *City Dog, Country Frog*, Willems (2010) tells the story of City Dog traveling to the country to visit his friend, Country Frog during the spring, summer, fall, and winter. In the beginning of the tale, the characters meet in the spring as Country Frog sits on a rock. When City Dog questions Country Frog about his actions, Country Frog replies that he is waiting for a friend, "but you'll do" (p. 4). Each of City Dog's repeated journeys to the Country to visit Country Frog is accompanied by familiar phrases and repeated sentences. The story also unravels into a circular pattern – one in which City Dog meets a new friend and the reader can assume that the story of this new friendship is accompanied by the same familiar phrases and repeated sentences.

Oftentimes the repeated structure of the text can be used to discover hidden messages. These messages can be discovered by combining the text structure, the content of the story, and the reader's prior knowledge. To assist readers in this process, we have created the Hidden Message Map. On this map, readers write the repeated words, phrases, or events. They also write a brief summary of the story and their prior knowledge of content related to the story. The reader then combines these three pieces of information to discover possible hidden messages. Figure 2 displays a completed Hidden Message Map which is a graphic organizer used to scaffold this process.

Through this scaffolding process, the literary conversation between the reader and the author is extended. The critical interaction to uncover the hidden message opens a dialogue between the reader's opinions about the character's situation and the author's written words. From this conversation, the reader forms a "critical/analytical stance" about the reasons for the character's problems, resolutions, and possibilities not specifically addressed by the author (Chinn, Anderson, & Waggoner, 2001, p. 381). Repetitious pattern books offer the opportunity for the reader to build personal value for the reading process through the use of deductive reasoning based on their prior knowledge and personal opinions.

### Final Thoughts

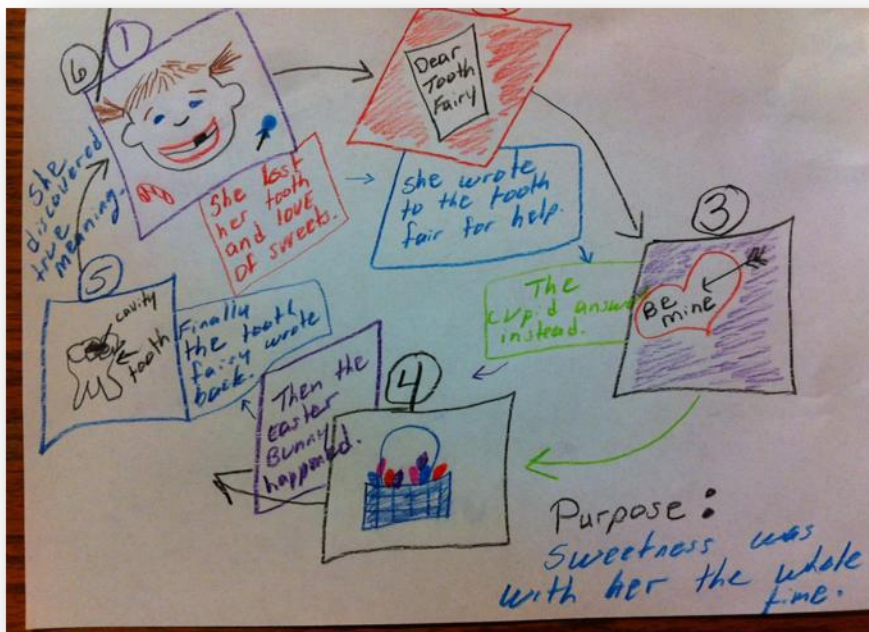
Teachers who use patterned books have an opportunity to model and scaffold comprehension building processes used by proficient readers. When considering the structured format of patterned text, all readers are offered fluency and comprehension support. When teachers provide repeated exposure to the text, readers gain awareness and sensitivity to the unique text structure. It is the very nature of patterned books which provides a friendly environment for readers to become involved in the meaning-making process through the rhyme, repetition, and circular story pattern.

Patterned books engage readers, increase comprehension, and assist readers in building necessary skills. They provide readers with the

opportunity to socialize with the text through the act of repeated exposure to words, phrases, or events. With patterned books, simple text becomes a journey of traveling back to where the reader began (Circle-tale pattern), a rhythm for conversation building (Rhyming pattern), or a mystery to uncover the “big” picture found among the recurrent events (Repeated pattern). With instructional tools such as Timecircles or Hidden Message Maps, teachers can assist readers in building

meaning-making relationships with books. Additionally, the use of these graphic organizers provide structure for emerging readers and highlights that fluent and engaged readers are in an active process of thinking about what the text reveals. Furthermore, the thoughtful and purposefully crafted conversations offered through patterned books between the author, reader, and teacher enhances the reading comprehension partnership.

**Figure 1. Example of a Timecircle for *Silverlicious* (Kann, 2011). A young reader created this timecircle to represent the events in *Silverlicious* (Kann, 2011).**



**Figure 2. Example of a Hidden Message Map created by a reader completed to identify possible hidden messages**

The Hidden Message Map		
<p>What are the repeated words, phrases, or events?</p> <ul style="list-style-type: none"> <li>• The story begins and ends with, "But you'll do."</li> <li>• City dog ran into the country without a leash.</li> <li>• Dog and frog spent the days playing.</li> <li>• The sons</li> </ul>	<p>What is the story about?</p> <p>The story is about a friendship between a dog and frog. The friendship takes place over one year.</p>	<p>What is your connection to the book?</p> <p>my best friend and I often play the same games over and over. sometimes I teach other kids our games.</p>
<p>What is the hidden message?</p> <ul style="list-style-type: none"> <li>• Friendships are comfortable and familiar.</li> <li>• Our current friends influence our later friendships.</li> </ul>		

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## Innovate Literacy Instruction with a Classroom Computer: A Solid Rationale for the Integration of Specific Digital Tools

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### Abstract

*The digital age has impacted education and how teachers prepare students to master 21<sup>st</sup> century literacies. Numerous national, state, and local entities have made the integration of technology into the literacy curriculum a priority, and teachers are becoming more proficient with their use of digital tools. However, integrating technology to develop students' literacy should be rooted in research-based best practices. This article provides a rationale to support the integration of specific digital tools to foster students' literacy development.*

The impact of the digital age within education is evidenced by the inclusion of “digital, electronic, and visual expressions” in the most current definition of literacy (Gentry & McAdams, 2013). Technology is not only a vehicle with which to develop literacy; it is a form of literacy. Over the last several years, national, state, and local entities have made the integration of technology in education a priority and focused efforts to address this newly recognized form of literacy. For example, in 2010, the National Education Technology Plan presented a model of learning driven by technology (U.S. Department of Education [DOE], 2010). Goals and recommendations were made in the following areas:

- Learning – Students’ learning experiences must be engaging and empowering.
- Assessment – Assessments that measure technology-driven learning experiences are needed. Moreover, decisions to improve student learning should be data-driven through appropriate use

of technology-based assessments.

- Teaching – Educators must be continuous learners with technology and work collaboratively with resources to improve student learning.
- Infrastructure – A concerted effort is needed to ensure schools address all infrastructure issues related to use of technology.
- Productivity – Technology in education is an essential component for planning, managing, monitoring, and reporting purposes among all educational stakeholders.

Increasing technology demands placed on educational entities also sparked support for educational professionals from professional membership associations, such as the International Society for Technology in Education (ISTE), and groups, such as the National Writing Project (NWP). The ISTE (2012) provides a forum for educational

stakeholders to move forward in their efforts to improve learning and teaching with effective use of technology.

Likewise, the NWP (2013), a professional development network for teachers, focused on improving the teaching of writing throughout all content areas. The NWP launched a Technology Initiative (TI) in 2004 aimed at developing quality writing programs within schools that supported thoughtful technology integration, expanded opportunities for teachers at local sites to access professional development and resources for technology and the teaching of writing, and connected local sites and teachers with valuable resources to support 21<sup>st</sup> century literacies.

Through the multitude of technology initiatives and professional development experiences, teaching professionals are becoming more familiar with digital tools, such as blogs, wikis, and various software packages, and integrating them into their literacy instruction. However, it is imperative that the digital tools are not just a novelty. Rather, teaching professionals must be intentional with their selection of digital tools and possess a strong understanding of how the integration of specific digital tools enhances students' literacy development. The purpose of this article is to provide educational professionals with a research-based rationale that supports best practices associated with the integration of specific digital tools during literacy instruction with a classroom computer.

## **The Need for Professional Expertise**

As schools continue to support the integration of technology, teachers must ensure they possess the required technological knowledge and skills to foster an effective technology-rich environment. Gentry and McAdams (2013) explored how the use of technology facilitated content learning in social studies with middle school students. Results showed that while teachers valued the integration of technology into instruction and were eager to learn technological skills from their students, they did not view technology instruction or the ability to model effective use of technology as part of their responsibilities.

In order for technology integration to be optimal, it is essential that teachers possess, as well as continually develop, their own digital proficiency. The ISTE (2008) developed National Educational Technology Standards (NETS), which specify the knowledge and skills education professionals require to learn, work, and teach in a digital society. For teaching professionals, the NETS describe specific knowledge and skills in the following areas: a) facilitate and inspire student learning and creativity, b) design and develop digital age learning experiences and assessments, c) model digital age work and learning, d) promote and model digital citizenship and responsibility, and e) engage in professional growth and leadership.

## **Tool by Tool Rationale to Foster Literacy Development Wikis**

The wiki provides opportunities for students to engage in both reading and writing tasks (Pifarre & Fisher, 2011). While students act as readers and writers simultaneously, they develop the higher order thinking skill of evaluation when reading their peers' contributions. In this same manner, students are improving their own revising skills through their individual contributions to writing in the wiki. Through writing, the wiki enables students to share, discuss, and debate ideas. The wiki also provides the teacher with a unique source of documentation that preserves the development of writing through students' collaborative efforts.

Pifarre and Fisher (2011) conducted a study involving the use of wikis with students ages nine and ten. According to Pifarre and Fisher, the wiki was an effective form of technology to incorporate as a digital tool during writing instruction because it provides all educational stakeholders "a window on the process of composition" (p. 453). In doing so, the process of writing is able to be broken down and tracked, which requires students to become more engaged with reviewing what is written. Moreover, teachers and researchers have a written account of all writing that has taken place.

## **Hypermedia Authoring**

Hypermedia authoring is defined as web page design that incorporates a variety of digital tools (Chang, Sung, & Zheng,

2007). As students engage in hypermedia authoring activities, they tend to focus on one aspect of the content, rather than connecting all of the components together. Hypermedia authoring also has the potential to constrain students' creative thinking due to students' unfamiliarity with the system and unrelated activities that cause distractions.

In order to utilize hypermedia authoring more effectively during writing instruction, Chang et al. (2007) adapted Lehrer's writing process to design five-stage process for hypermedia authoring:

1. Establish the topic and set goals: Once students determine the topic they intend to address, they must first review their knowledge about the topic, set goals for the intended final product, and determine how information for the webpage will be collected.
2. Planning: Next, students create an outline for the content in their webpage by making a list consisting of only titles.
3. Organization: Following the outline created during the planning stage, students arrange the structure of their webpage by organizing the layout of the content.
4. Construction of content: Students collect information related to their topic from a variety of sources and build content through the use of digital tools to incorporate into their webpage.
5. Review and evaluate: Finally, students review their completed webpage and evaluate it for completeness and clarity of structure and content.

## **Computer-Generated Graphic Organizers**

Research shows that student use of graphic organizers creates more competent readers and writers (Lorenz, Green, & Brown, 2009). Graphic organizers enable writers to stay on topic by organizing ideas in a spatial form, provide a way for students to connect their prior knowledge to their writing, and assist students with the recall of information. Lorenz et al. studied the use of computer software with young students to assist with graphic organizer completion during the planning phase of writing. Kidspiration<sup>®</sup> software was utilized to create graphic organizers as students planned for a narrative writing assignment in this study. Popplet (popplet.com) and concept board (conceptboard.com) are other computer applications used to create graphic organizers, too. Findings from this study showed that the use of computer-generated graphic organizers fostered development of organizational skills among young students (Lorenz et al, 2009). Students in this study also displayed more verbal enthusiasm with use of the computer-generated graphic organizer compared to the traditional paper template graphic organizer. Moreover, findings showed that students were more focused during writing sessions and were willing to work for longer periods of time.

## **Author's Computer Chair**

Similar to an Author's Chair in a writing workshop classroom, the Author's Computer Chair is a designated time and place where students "discuss computer-related processes of meaning

making" (Labbo, 2004, p. 688).

Students can use this time to discuss current projects involving the use of the computer, demonstrate the use of digital tools on the computer, share an email communication, or share a digitally-created product. Labbo articulated five guidelines necessary for teachers to establish a classroom environment that fosters successful implementation of the Author's Computer Chair:

1. The learning environment and social atmosphere of the classroom must create a safe classroom environment where students share ideas, receive feedback, and work collaboratively with peers.
2. Teachers must continuously model and demonstrate appropriate use of the Author's Computer Chair through strategically-planned minilessons.
3. Teachers must intentionally schedule daily or weekly time for the Author's Computer Chair.
4. Teachers must encourage students to share digitally-created products at all stages of development.
5. Teachers must incorporate regular discussion routines for students to become accustomed to the Author's Computer Chair.

## **Digital Writing Communities**

Digital writing communities provide a multitude of opportunities for teachers to address specific needs of all writers, including students with exceptional writing talent (Olthouse & Miller, 2012), students with learning disabilities (Jones, 2012), and young writers within the early stages of writing development (Pifarre & Fisher, 2011). Providing

frequent opportunities for all students to develop literacy through the strategic integration of digital tools promotes innovation with instructional design and assists with students' development of digital competencies through participatory and collaborative contexts.

### **Online writing communities**

Online writing communities provide student writers with a forum consisting of other writers (Olthouse & Miller, 2012). Online writing communities are especially beneficial for students with exceptional writing abilities because this forum provides a level of support from peers with similar abilities outside of the classroom. Due to the lack of control teachers have, online writing communities are most appropriate for older students. Popular online writing communities for secondary age students include Figment.com and Teenink.com.

### **Kidblog**

Kidblog (<http://kidblog.org/home/>) provides a safe blogging space for all students to practice responsible digital citizenship through a socially-driven digital tool (Kidblog, n.d.; Olthouse & Miller, 2012). Teachers maintain administrative control over students' accounts and blogs, which are also only accessible by the teacher and students in the class. Other guests, such as parents, can be added by the teacher.

### **Glogster EDU**

Glogster EDU (<http://edu.glogster.com/>) is an online platform through which all students create glogs. Glogs are online posters enhanced with digital tools, such as videos, text, photographs,

sounds, data attachments, drawings, or graphics (Glogster EDU, n.d.; Olthouse & Miller, 2012). Creating glogs on Glogster EDU is safe because teachers create private classrooms via the website, which generates individual student accounts accessible with safe logins and passwords. The teacher is able to monitor activity within all student accounts at all times. Templates for glogs are available, and the teacher is able to create assignments for students, give instructional guidelines, provide feedback to students throughout the creation of their glogs, and assess the completed project. Glogs can also be shared on a webpage, in a wiki, or embedded in a blog.

### **Storybird**

Storybird (<http://storybird.com/>) is a virtual platform where all students can create original written works using artwork from animators and illustrators from all over the world (Olthouse & Miller, 2012; Storybird, n.d.). Teachers create classes and provide safe access for students; all work remains private unless the teacher chooses to provide access to specific individuals. Teachers can create assignments, review work at all stages of creation, and assess students' work.

### **Conclusion**

As education continues to embrace student development of 21<sup>st</sup> century literacies, teachers must ensure they have a solid rationale for the integration of specific digital tools. Selection of a specific digital tool should be rooted in research-based best practices, and

teachers must also ensure they possess the required knowledge and skills regarding effective use of the digital tool so they may assist students when needed. As teachers move forward in developing their expertise with

technology integration during literacy instruction, support from school campus administration, as well as all other educational stakeholders is necessary.

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# Defining Literacy in the 21<sup>st</sup> Century: A Guide to Terminology and Skills

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## Abstract

*In the twenty-first century, literacy skills increasingly reflect technology use and the abilities necessary to problem-solve, collaborate, and present information through multi-media. As technology becomes more readily available to all students, concepts of literacy change. Researchers and theorists from various disciplines define and describe 21st century literacies using many terms that are inadvertently interchanged and/or unfamiliar to teachers. The purpose of this article is to review contemporary definitions of literacy to clarify what is currently known about 21st century literacy skills.*

Literacy generally refers to reading and writing effectively in a variety of contexts. In the 21st century, the definition of literacy has increasingly reflected the ability to use technology for gathering and communicating information. The International Reading Association (IRA) stated that the literacies used by today's students are much different from those of their parents or even those of students from just a decade ago (IRA, 2009). The IRA position statement reported that in order "to become fully literate in today's world, students must become proficient in the literacies of the 21st century technologies" (p.1).

Since IRA's statement adoption in 2009, abundant research has been published about 21st century literacy skills. In addition, the National Education Technology Plan (NETP, 2010) called for an emphasis on 21st century competencies at all levels of education.

However, literacy concepts have not only been changing, they have been overlapping, as information literacy, multiliteracies/multiple literacies, new literacy, digital literacy, and web literacy are all used to describe similar skills necessary for 21st century learning. The intent of this literature review is to document and clarify what is currently known about 21st century literacy skills in order to provide clarity and consistency among educators.

## 21st Century Literacies

### Information Literacy

Information literacy has been historically used to reference the literacy skills needed for information access and problem-solving. Paul Zurkowski, President of the Information Industry Association, included reference to this term in a 1974 proposal recommending the establishment of a program to promote information



literacy. In 1976, Burchinal explained information literacy required new skills that would "...include how to locate and use information needed for problem-solving and decision-making efficiently and effectively" (p.11). In 1998, a report from the American Library Association (ALA) explained, "To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information" (p.1). In addition, the report described those who are information literate as people...

...who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information and how to use information in such a way that others can learn from them. They are prepared for lifelong learning, because they can always find the information needed for any task of decision at hand. (1998, p. 3).

The ALA report further outlined six areas of competency: 1) recognizing a need for information, 2) identifying what information would address a particular problem, 3) finding the needed information, 4) evaluating the information found, 5) organizing the information, and 6) using the information effectively to address the specified problem (ALA, 1998). This definition has remained the generally accepted foundational definition in the literature (Campbell, 2004; Spitzer, Eisenberg & Lowe, 1998).

Sources of information have changed since the original definitions of information literacy and as technologies

have advanced, the ways in which research and learning transpire have become entwined with information literacy. The American Association of School Librarians (AASL) has established standards to guide practitioners. The four standards state that learners will use skills, resources and tools to: 1) inquire, think critically, and gain knowledge; 2) draw conclusions, make informed decisions, apply knowledge to new situations, and create knowledge; 3) share knowledge and participate ethically and productively as members of our democratic society; and 4) pursue personal and aesthetic growth (AASL, 2007).

While the term information literacy has provided the foundation for various literacy frameworks, it is somewhat limited as it focuses on the learner's use of information; while current technologies allow the learner to not only use, but to construct and disseminate information.

While using information in this standard definition suggests a range of author practices, it exists independently from the act of creating and sharing information through collaborative ventures. The definition adopted by ACRL [the Association of College and Research Libraries]...expands upon the ALA definition by emphasizing the depth of the information needed, the ability to find the information effectively and efficiently, the incorporation of new information with existing knowledge, and an understanding of the information environment. (Mackey & Jacobson, 2011, p.63)

This extension is a necessary consideration as learners become literate in the information age and as literacy is evaluated from emerging perspectives.

### **Multiliteracies/Multiple Literacies**

In 1996, the New London Group coined the term multiliteracies to describe a more contemporary view of literacy that reflected multiple communication forms and a context of cultural and linguistic diversity within a globalized society. Thus, multiliteracies was defined as the multiple ways of communicating and making meaning, including such modes as visual, audio, spatial, behavioral, and gestural (New London Group, 1996).

A similar term, multiple literacies, also depicts the ways people read and write in their lives. This definition includes a variety of static texts, such as books, magazines, labels, and pamphlets as well as non-print media such as music, art, film, and television. In other words, multiple modes of communication are possible, and these modes affect the ways readers approach a literacy situation.

Kress (2003) attributed the changes in concepts of literacy to the media. He specifically discussed media shifts from book to screen, which enabled the use of a variety of modes of communication. Therefore, the term multimodality describes the various ways print and media are represented and are a huge component of new concepts about literacy. Multimodal forms of information include visual and audio modes of communication presented through print, photos, videos, or graphs

(Kress, 2010). These various modes of communication affect the way readers approach text. For example, graphic novels, a more complex version of the traditional comic strip (Schwarz, 2006), require visual literacy skills to comprehend both the text and the illustrations used by the author to represent meaning. The dimensions of multimodal literacy add to the complexity of online learning and expand the ways readers acquire information and comprehend concepts. Thus, teachers need to understand the literacy skills involved in comprehending text or media that utilizes various models of presentation.

Reading is a cognitive process as well as a social/linguistic process. Multiple literacies include the varied forms of text as well as the cultural identities expressed during communication, known as discourse (Sheridan-Thomas, 2007). Sociolinguists discuss discourse, semiotics and other terms relating to the use of symbols to convey meaning with and emphasize culture and the role it plays (Gee, 1996). Many cognitive researchers seek to understand the skills, strategies, and dispositions required for effective online reading comprehension (Coiro & Dobler, 2007; Jetton & Shanahan, 2012). The multiple disciplines/theories involved in defining literacy contribute to the complexity of this topic.

### **New Literacy**

What is “new” about literacy?

Researchers suggested that concepts of literacy beyond the traditional views of alphabetic writing, vocabulary knowledge, and recall of information

may be considered new (Coiro, Knobel, Lankshear, & Leu, 2008). Definitions of literacy depend on emerging technology tools which require different ways of conceiving and communicating meaning presented in multiple media and modality forms as a part of literacy. The Internet has greatly impacted literacy and has contributed to changing views of literacy (Coiro et al., 2008). New web-based tools emerge on the Internet constantly and require specific, new, skills.

The terms multiple literacies and new literacies signify a broad range of perspectives on literacy similar in that they convey an understanding of literacies as social and cultural practices that are continuously changing. However, discussion of new literacies tends to involve new technologies, and literacy education (Cervetti, Damico, & Pearson, 2006). These two concepts tend to involve many literacies and modalities beyond print literacy (including new literacies) as well as an emphasis on cultural considerations (Cervetti, Damico, & Pearson, 2006). Many terms are associated with new literacies. Digital literacy, 21st century literacies, internet literacy, media literacies, information literacy, ICT literacies, and computer literacy refer to terms which evolved to describe literacies associated with ways to gather and communicate information using the Internet and new technologies (Coiro et al., 2008).

Many disciplines recognize and define new literacies, and a new literacies perspective has emerged based on a wide range of research (Coiro et al.,

2008). Because the research comes from various fields such as cognitive science, sociolinguistics, cultural anthropology, information science, and others, it can be difficult to understand the varying terminology. Leu, Kinzer, Coiro, and Cammack, (2004) stated that new literacies allow individuals to use the Internet “to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others” (p. 1570). Therefore, one might consider any technique requiring new technological reading and writing skills to be a new literacy. For example, blogging is an online form of a journal that requires new skills for users. Media sharing, such as photo and video sharing, also requires new skills for users (Pilgrim & Bledsoe, 2013).

Leu et al. (2004) presented a difference between the terms new literacies (lower case) and New Literacies (upper case). This difference may best be explained with the familiar umbrella analogy. Consider the overarching umbrella to be New Literacies. Everything in the field under the umbrella, including topics in this article, includes new literacies. According to Leu (2011), lower case theories reflect the rapidly changing nature of literacy in a deictic world since they are closer to the specific types of changes that are taking place and interest those who study them. Lower case theories enable the use of multiple lenses that are used and the technologies and contexts that are studied. All theoretical insights are valued, even if they do not share a

particular lens, technology, or context (Leu, 2011).

### **Digital Literacy**

Digital literacy describes reading and writing tasks utilizing media powered by technology. Digital literacy is the ability to find, evaluate, utilize, share, and create content using information technologies and the Internet (Cornell University, 2009, para. 1). This is a very general, broad term related to skills necessary in the 21st century and often used interchangeably with new literacy and information literacy. Jones-Kavalier & Flannigan (2008) narrowed the definition of digital literacy as "...the ability to read and interpret media (text, sound, images), to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments" (p.14).

Digital literacy has become a more common term since Marc Prensky (2001) coined the terms digital native and digital immigrant to describe generational differences among learners. According to Prensky, a digital native was born in the digital age with access to technology. A digital immigrant refers to one lacking exposure to technology until later in life. However, just because one is born in the digital age does not mean the digital natives have instinctively learned how to use technology effectively. It cannot be assumed they know how to synthesize and analyze what they access, as ....

the greatest challenge is moving beyond the glitz and pizzazz of the flashy technology to teach [new]

literacy in this new milieu. Using the same skills used for centuries- analysis, synthesis, and evaluation- we must look at digital literacy as another realm within which to apply elements of critical thinking. (Jones-Kavalier & Flannigan, 2008, p.14)

The Department of Education used the term digital literacy in the National Education Technology Plan (U.S. Department of Education, 2010) in reference to skills teachers need for the development of appropriate assignments for students to improve learning, assessment, and instructional practice. This extensive plan for transforming education referenced the ISTE standards for additional information about what it means to be digitally literate in an age of evolving technology. According to The International Society for Technology in Education (ISTE), "Today's students need to be able to use technology to analyze, learn, and explore. Digital age skills are critical for preparing students to work, live, and contribute to the social and civic fabric of their communities" (ISTE, 2012, para. 2). ISTE developed the National Educational Technology Standards (NETS) for student success in a digital age which include skills related to creativity and innovation; communication and collaboration; research and information fluency; critical thinking, problem solving and decision making; digital citizenship; and technology operations and concepts.

### **Web Literacy**

Web literacy refers to the skills needed for successful web navigation

(November, 2008). Online reading requires specific skills, and these skills are often referred to by educators in K-12 settings as web literacy skills. Classroom practices often involve research and “the rules of research have changed with society’s move from paper to digital information” (November, 2008, p. 6). Web literacy may fit under the umbrella of New Literacies in that it relates directly to skills needed to locate information accurately and effectively. Web literacy is also reflective of digital literacies, as it is a term used to explain knowledge an individual needs to find information, to examine content, to find out who published a Web site, and to see who is linked to a site (November, 2008).

Web literacy skills are similar to traditional reference skills used to navigate textbooks and paper based reference materials. For example, where a student may use key words at the top of a dictionary to help them navigate the resource, they may use words/symbols in a URL (uniform resource locator) to help them navigate a website. A student may use web literacy skills to determine the author of a website, or he/she may use knowledge of domain names (edu, .org, .com) to determine what type of website is available. As more and more online research is required of students, educators need to understand the importance of knowledge about Internet searches, hyperlinks, search engines, and other components of Internet searches. This knowledge is crucial to help students find reliable information online, while keeping them safe in the process.

Blanchard and Farstrup (2011) suggested that Internet searching skills are essential for secondary students and they are in need of instructional support. Many educators in higher education have left the dissemination of literacy knowledge and search skills to the technology experts. However, web literacy skills are a component of all disciplines and should be integrated into the curriculum. According to Pilgrim and Bledsoe (2012), teachers in a middle school utilizing a one-to-one iPad initiative reported concerns with plagiarism and with students skimming online information. Teachers reported students lacked skills needed to find information in an online setting. Middle school students seemed to skim the text and focus on pictures, unable to find and retain the important information in the text. These concerns mirror Kymes’ (2005) research, in which he described a “snatch and grab” (p. 494) strategy where readers skimmed and scanned online information in order to navigate overwhelming amounts of information.

In addition, online information is “linked” in ways that vary from traditional text. For example, information is interconnected through hyperlinks and visuals in multiple ways, and understanding online text can be a complex process (Coiro & Dobler, 2007). Intertextuality and text navigation become critical variables in constructing meaning (Jetton & Shanahan, 2012) and have contributed to the new notions of literacy.

## Conclusions and Recommendations

The Texas College and Career Readiness Standards addressed technology skills and literacy applications, including the ability to gather, organize, manage, analyze, and communicate information (Texas Higher Education Coordinating Board, 2009). As teachers integrate these skills into classroom instruction, they need to have a clear understanding of what it means to be literate in the 21st century.

A review of the literature provided some insight into various 21st century literacy terms as well as skills needed for 21st century learning, as online reading tasks differ from offline tasks. Teachers need to understand the similarities and differences in order to use reading and writing strategies and apply skills within an online reading environment (Coiro, 2011). Text features presented in online reading, such as hyperlinks, digitized speech, embedded glossaries, and interactive questions, affect the online environment (Gunning, 2012). Students encounter a great deal of information during online reading tasks and need to know how to navigate the information in an effective manner. As teachers address these skills in the classroom, we recommend consistency in term usage in both practice and in teacher preparation programs.

Understanding the distinctions of these terms allows teachers to effectively integrate the specific discerning associated skills. The common thread across all literacy terms defined in this

article is technology. Table 1 presents a summary of the aforementioned terms.

The chart shows that while all of the literacy concepts presented include technology, while new literacies or multiple literacies extend beyond technology-related literacy skills to include visual media. In addition, all the terms deal with how knowledge is gained. And, even though information literacy was initially used to recognize information gathering using reference materials housed in libraries, the definition today is used infrequently in library and information science literature to include skills necessary for successful information access through Internet navigation. Thus, teachers must address the students' ability to read nonlinear text in an online environment.

The two terms that seem most practitioner-friendly are web literacy and digital literacy. Web literacy, as the term implies, describes a user's Internet navigation skills as well as critical thinking skills required to evaluate online information. This term is not as broad as digital literacy, but the skills provide teachers with concrete ways to help students search for accurate and reliable information in a safe Internet environment (November, 2008). This type of information and support for teachers has enabled educators to develop curriculum for teaching literacy skills.

Definitions of literacy will continue to change as new technologies emerge (Leu et al., 2004). Additionally, these new technologies will continue to

impact education and how teachers address literacy tasks. Thus, educators need to understand 21st century

literacy skills and the roles they will play in classroom instruction.

**Table 1**  
***Summary of 21<sup>st</sup> Century Literacy Terminology***

Term	Description
Information Literacy	The ability to recognize when information is needed and to have the ability to locate, evaluate, and use effectively the needed information (ALA, 1989).
Multiliteracies	The multiple ways of communicating and making meaning, including such modes as visual, audio, spatial, behavioral, and gestural (New London Group, 1996).
New Literacy	The use of new technologies to gather and communicate information (Coiro et al., 2008).
Digital Literacy	The ability to find, evaluate, utilize, share, and create content using information technologies and the Internet (Cornell University, 2009).
Web Literacy	The knowledge and use of specific skills needed to locate, analyze, and communicate information found online.

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## When Every Hand is a Winner: Developing Critical Thinking with a Card Game

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### Abstract

*Increasing student's critical thinking is the focus of many current education discussions. Experts in reading agree that the keys to building critical thinking include: engagement, novelty, cooperative learning, and discussion. Wiggins and McTighe (2005) insist that deep learning and critical thinking can be developed by using questions based on six facets of understanding: explain, interpret, apply, see from various points of view, empathize with various participants, and thinking metacognitively about each subject or element of study. This article describes how these ideas were turned into a card game to not only motivate students to participate but to engage students in critical thinking.*

Increasing the ability of students to think critically is at the forefront of discussions in education. In fact, a simple search of the Reading Teacher journal archives using the term "critical thinking" reveals sixteen articles from 2013 and forty-two from 2012. It is not just the authors from The Reading Teacher who are thinking about critical thinking, but the test makers, policy makers, teachers and parents also seem to be engaged in the conversations regarding critical thinking (Bloom, 2013; Obama, 2009; Texas Education Agency, 2012). The Texas Education Agency (TEA) demonstrated their commitment to critical thinking when they stated, "Even at the initial phase-in level, the STAAR passing standards require students to demonstrate more in-depth knowledge, critical thinking, and application skills than did the Texas Assessment of Knowledge and Skills (TAKS)" (TEA, 2012, para. 3). The California Superintendent of Instruction,

Tom Torlakson, revealed that like Texas, California was also moving into a focus on developing critical thought, "like the new standards, state testing will focus on critical thinking and problem-solving skills" (Calvert, 2013, p. 2). The American Federation of Teachers President, Randi Weingarten, proves this is a national focus in her statement "the common core is about problem-solving, critical thinking and teamwork" (Bloom, 2013, p. 2). Even President Obama refers to the need for increasing critical thinking in the education of all students (Obama, 2009).

Critical thinking is not a new idea or topic of conversation for teachers. Teachers recognize the value of critical thinking in the process of educating children. This recognition is demonstrated in their efforts to take their students beyond the boundaries of teaching-to-the-test and just teaching what is in the book (Wiggins & McTighe,

2005). Unfortunately, critical thinking is hard to teach (Ennis, 1993). One method of teaching critical thinking is through the process of infusion. The infusion of critical thinking instruction in subject-matter requires the teacher to incorporate critical thinking through explicit teaching, modeling and scaffolding (Ennis, 1989). However, for teachers who have yet to metacognitively assess their own critical thinking skills, making this type of thinking explicit is difficult.

Motivation is certainly one of the most important factors in developing learning and increasing critical thinking abilities (Ennis, 1996; Williams & Williams, 2011). Games create an opportunity for students to become motivated because games, by nature, lead to some form of increase in knowledge (Garris, Ahkers & Driskell, 2002; Gee, 2003; Prensky, 2006). It is that increase in knowledge that produces an intrinsic appeal to the activity or situation. This appeal can result in repeated engagement, persistence, and focus (Jensen, 2005).

There are many ways to engage students, with novelty, emotional involvement, and cooperative learning being among the top characteristics found in the most engaging strategies and learning experiences. In addition, teachers should employ more cooperative learning, active learning, talking and collaborating (Zemelman, Daniels, & Hyde, 2005). However, these ideas of collaboration, engagement, and discussion are wonderful but cannot be expected to happen in a way that maximizes student learning unless the

teacher intentionally sets up the discussion environment.

Wiggins and McTighe (2005) point out that the intentionality to create an environment in which students make relevant, deep connections to learning must enable the student to focus on a concept from many points of view. They must be able to explain, interpret, apply, see from various points of view, empathize with various participants, and think metacognitively about each subject or element of study. Teachers understand the need to provide these kinds of learning experiences in their classroom. The problem is that in today's test driven, over planned, sometimes scripted school day, the teachers are not sure how to effectively and efficiently provide opportunities to promote critical thinking.

### **Purpose of Study**

Research has shown that helping students to thinking critically in today's classroom is difficult for a multitude of reasons. Thus, the purpose of this study is to examine how a new card game can help teachers provide this type of learning.

### **Developing the Card Game**

#### **Picking the Words on the Card**

The words on the cards were selected specifically to provide a framework for defining understanding as a multi-faceted process so the student would begin to know the process of understanding is more than just memorizing to pass a test. The words for the game are intentionally selected to teach on many levels associated with the new

Bloom's Taxonomy as well as the qualifications for Wiggins and McTighe's Six Facets of Understanding (2005) as demonstrated in Table 1 located at the end of the article.

Because the words are selected in a way to provide students with a learning experience that looks at information from a variety of difficulty levels as well as a variety of viewpoints, students are guided into a process for developing critical thinking. As the students discuss from the varied viewpoints, their knowledge base is deepened as well as widened with the addition and refinement of information thus scaffolding critical thinking.

#### **Creating the Discussion Guide Card**

The development of critical thought can be easily achieved through a discussion guide set within a simple card game. Using the card game as a motivator, as well as the structure for the discussion, students will talk about the text topic using the discussion words from their winning hands. If the student is able to discuss the topic using the word, he/she gets to keep the winning points. The words printed on the deck of cards serve as the guide for discussion (Table 2).

Although these words appear to be very high-level, students at any age may be led into an understanding of what the words mean and how to use them. Students will experience a greater success rate if the words are pre-taught as well as modeled. The cognitive skill necessary to use these words to guide discussion also needs to be pre-taught and modeled. These words may be

used to discuss any topic or text. The possibilities are limitless.

#### **Playing the Card Game**

The game was used to help the graduate students prepare for their final exam. The class of 24 students split into groups of four to six. Each group was provided with a deck of pre-made cards, an exam study guide, containing study topics from class, and a guide to explain the words. The guide to explain the words was provided because there was not enough time to pre-teach the words. Students were then instructed to play any card game with the stipulation that at the end of each hand the winner would select the topic from the study guide and a word from the winning hand for the group discussion. After class, two of the students came forward with a desire to relay their experiences and collaborate on the composition of an article.

#### **Velery's Experience**

Within the college study group, Go Fish was the chosen, and whoever won each hand was to pick a subject from the study guide to discuss. This was a very engaging cooperative activity that promoted problem solving skills, and created a comfortable environment to teach and learn. As the group discussed, all participants were teaching each other, while learning from each other, as well. It was exciting to see who was going to win the hand by obtaining a pair of cards and what they were going to pick from the guide as our discussion topic. It boosted all of the participant's critical thinking about the concepts on the study guide and helped everyone feel like prepared for the test.

It also created a powerful and engaging learning atmosphere.

### **Jennifer's Experience**

This group had fun playing the card game. It was easy to learn while being engaged in the game and discussion. While holding the cards, one could look through the words accessing prior knowledge to determine personal understanding of the topic. When it was time to talk about the information, participation in the group discussions was easier. The opportunity to discuss the information in an engaging way provided an exciting learning experience that inspired writing on this activity.

Based on these retelling of these experiences with the game, it is clear that the card game provided an engaging opportunity to participate in an active cooperative learning experience. Moreover, this game provided the venue for each to expand their critical thinking skills through engagement, discussion, cooperation and focused attention to recall related to a discussion guide. It is evident that the card game has the potential to promote learning in a way that educationally and emotionally impacts the student. Apart from the student experience, it is important to keep in mind that this deck of cards is designed to produce a change in what students perceive it means to understand.

### **Conclusion**

There are several expectations of the card game. First, as students are given the opportunity to repeat the game, they will begin to tailor their personal learning to enable them to discuss the topic or information using the words found on the card discussion guide. Second, once this thinking process becomes internalized, students will abandon surface memorization and adopt a more thorough understanding of information which is necessary for critical thought. Third, the type of thinking developed through the use of the discussion cards embodies the principles and processes for critical thinking and creates the opportunity for these principles and processes to become habit.

This is certainly an exciting time to be a student. With the focus on critical thought and the information and tools available to guide and motivate students, there is no reason for the classroom to be anything other than exciting, engaging and educational. By engaging students, using a variety of words to guide discussion and focusing on the many facets of understanding, this card game has the possibility to become a powerful and indispensable tool in the educator's toolbox.

**Table 1**  
**Alignment of Words**

Six facets of Understanding	Bloom's Taxonomy	Card game Words		
Explanation	Remember/ Understand	Explain	Articulate	
Application	Application	Apply	Use	
Interpretation	Analysis	Analyze	Interpret	
Empathy		Consider	Empathize	
Perspective	Evaluate	Experience	Associate	Perceive
Self-knowledge		Self-Illuminate	Self-Explicate	

**Table 2**  
**Card Discussion Guide**

Card Value	Word on Card	Explanation of the Word Adapted from Wiggins and McTighe (2005)
Ace	Explain	Tell all you know about the topic. Give examples, make connections to other ideas, and prove your knowledge.
King	Interpret	Show or tell the importance of the learned information. Make sense of it. Show the meaning by telling a story.
Queen	Apply	Demonstrate how the information may be used. Tell how it is used in real life or why it is important in real life.
Jack	Empathize	Tell how this information would affect someone else or how someone else might look at it.
10	Associate	Make connections to other knowledge or situations.
9	Consider	Think how this information can/might affect you personally. What can you do or avoid by having this knowledge?
8	Self-Illuminate	What do you think you understand and how do you know you understand it? Talk about what you are unsure of.
7	Experience	Think about your involvement with this information and describe your experience with the information and the learning process.
6	Articulate	Explain all you know about the information. Give examples, make connections to other ideas, and prove your knowledge.
5	Analyze	Determine the different elements in the information and tell how they fit together. Verbally take the information or idea apart.
4	Use	Demonstrate how this information may be used. Tell how it is used in real life or why it is important in real life.
3	Perceive	Think how this information can/might affect you personally. What can you do or avoid by having this knowledge?
2	Self-Explicate	Explain what you think you understand and how you know you understand it. Talk about what you are unsure of.

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## Sharing Common Ground: Texas and the Common Core State Standards

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### Abstract

*When browsing through professional catalogs or attending national conferences, one cannot help but notice the growing emphasis on the Common Core State Standards (CCSS). So, what does this mean for Texas teachers? As part of a special four-part series in our Texas Journal of Literacy Education, a special task force from the TALE Board will share the common ground among the CCSS, the Texas Essential Knowledge and Skills (TEKS), and the College and Career Readiness Standards (CCRS). Here, we begin part one of this series by briefly discussing the history of this national movement and the creation of our own state standards. Throughout the series, we will discuss the commonalities and differences among the various sets of standards and how they each address student outcomes for developing skills for both writing and reading.*

Texas is often cited as the birthplace of educational standards and accountability systems using high-stakes testing. When former governor, George W. Bush became President of the United States, Texas' accountability movement became the foundation of No Child Left Behind, the most influential national education legislation since Lyndon Johnson's Elementary and Secondary Education Act (Frontline, n.d). Recently, the nation was presented with yet another high profile effort to improve education when President Barack Obama and Congress reauthorized the Elementary and Secondary Education Act (ESEA) as part of the charge for all American children to have a "world class education". With

many similarities to its predecessors, the ESEA features the following three goals (Department of Education [DOE], 2010):

- Raising standards for all students in English language arts and mathematics;
- Developing better assessments aligned with college- and career-ready standards; and
- Implementing a complete education through improved professional development and evidence-based instructional models and supports.

The reauthorization of ESEA, informed by lessons learned from No Child Left Behind (NCLB), has led to a nation

united in one common goal —preparing students to be successful in postsecondary education or a career once they complete high school. The National Governors Association (NGA) Center and Council of Chief State School Officers (CCSSO) (2010) explain that the Common Core State Standards (CCSS) are “designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers” (“Mission Statement”, para. 1). Involvement and adoption of the CCSS is voluntary as is how and to what degree each state implements the standards. An adopting state agrees to adopt the CCSS in its entirety, but additional standards may be determined by the state so that at least 85% of their standards will be the entirety of CCSS and 15% customized to the state (Lewin, 2010). As a result, although the core is common, there is flexibility and opportunities for differentiation for each state. As of December 2013 forty-five states, the District of Columbia, four territories, and the Department of Defense Educational Activity have adopted the CCSS. Of this participating group, some of these adoptees, such as Alabama, Georgia, Oklahoma, and Utah, have opted out of the testing consortiums that have accompanied the CCSS (Bidwell, 2013). Among those states that have not adopted the CCSS are Minnesota, Nebraska, Virginia, Alaska, and Texas.

The decision to abstain from adopting the CCSS has left many Texans wondering— Why? To help better understand this decision, the first article of the series will present the histories of

the standards driving both our state’s and the Common Core State Standards’ educational goals. This historical perspective and foundational knowledge will help to set the stage for future discussions on the commonalities and differences among the various sets of standards and how literacy outcomes are addressed.

### **History of Texas Essential Knowledge and Skills**

The Texas Essential Knowledge and Skills (TEKS) is known to most Texas teachers as the grade-by-grade, subject-specific state standards that outline what Texas students should know and be able to perform. However, the creation of the TEKS is often times less known. Our brief historical explanation of the TEKS travels back to the early 1980s — the time frame when the current educational reform movement at both the national and state level was launched.

Nationally, the report titled, *A Nation at Risk* (National Commission of Excellence in Education [NCEE], 1983) was released by the Reagan administration in 1983. This report indicated that after concentrated emphasis on education following the Space Race and Sputnik reforms of the 1960s, the nation had become complacent and had fallen behind internationally. This report became the catalyst upon which the school reform movement began with recommendations for change in the following five areas: curriculum content, standards and expectations of students, time devoted to education, teacher quality, and educational

leadership and the financial support of education. Among these five recommendations, two specifically informed the state-standards movement with energy and urgency — curriculum content and standards for expectations of students' learning outcomes (US Department of Education, 2008).

Interestingly, two years prior to the release of *A Nation at Risk*, the Texas legislature mandated an upgrade to the state curriculum, and by 1984 the Texas Board of Education passed its first state-mandated and standardized curriculum, the Essential Elements (Bridgman, 1984). In terms of the curricular reform ignited by *A Nation at Risk*, Texas was already working towards clear and specific state standards and curriculum content. By 1997, the Essential Elements were revised and renamed, the Texas Essential Knowledge and Skills, or TEKS, to reflect a more specific and rigorous set of standards. Since then, the English Language Arts (ELA) TEKS were revised beginning in the 2007-2008 school year, completed and approved in 2009, and introduced to teachers through professional development in Spring and Summer of 2011 for implementation beginning with the 2011-12 school year.

### **Creating and Revising the TEKS**

So who writes or revises the Texas standards and how are they determined? The English Language Arts (ELA) TEKS were the first set of standards to go through the revision process since the original change from Essential Elements to TEKS in 1997. From the 2007-2008 onset of the first

review, the process has been revised and refined as other subject areas have undergone their review process. The Texas Education Agency (TEA, 2011) makes the process public through listserves, presentations, and public meetings so that educators, parents, business leaders and any interested citizen has the opportunity for input along various junctures during the process. Currently, revising the TEKS is a four year process that is scheduled on a six year cycle, with the next round of revisions due the spring of the 2014-15 school year (TEA, 2012b).

The initial review of the TEKS is made by an expert review panel nominated by members of the State Board of Education (SBOE). To be considered for this panel, one must have an earned bachelor's degree or higher, have demonstrated expertise in the subject area under review, and either taught or worked in the subject area or field under review. Each SBOE member may nominate one expert reviewer and an expert reviewer must receive two nominations to be considered for the panel. Once the expert review panel has been established, the Texas Education Agency sends the current TEKS to them for initial review, feedback, and recommendations. When the expert review panel has made their recommendations, their work is sent to a TEKS review committee comprised of "educators, parents, business and industry leaders and employers" (TEA, 2011). This committee, which is also nominated by the SBOE, is charged with supporting the SBOE in meeting the requirements associated with the revision process and

reviewing the recommendations from the expert panel. The SBOE requires the TEKS review committee to utilize the expert review panel recommendations while implementing the following (TEA, 2011):

- use the current TEKS as the foundation document;
- consider the general course of study, rather than advanced course options;
- consider College and Career Readiness Standards while revising the TEKS;
- ensure the revisions comply with related statutes;
- provide justifications for all suggested revisions; and
- track all revisions to show what has been changed.

The TEA staff manages the documents and prepares drafts reflecting the TEKS review committee recommendations. There is a back and forth process of review, feedback, revision between the expert review panel and the TEKS review committee. The SBOE invites testimony from the expert panel and representatives of the review committee and then TEA staff prepares a rule draft that is presented in a two public hearings and online for a 30 day public review and comment. TEA compiles and summarizes the public comments. The SBOE considers the public feedback and considers amendments. During the next SBOE scheduled meeting amendments are considered, a second reading of the standards document with any approved amendments is completed, the

standards are adopted and the implementation date is determined.

### **Organization of the TEKS**

The English Language Arts and Reading TEKS (2012b) are organized into the following strands:

- Reading, where students read and understand a wide variety of literary and informational texts;
- Writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail;
- Research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information;
- Listening and Speaking, where students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and
- Oral and Written Conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing (p.1).

The Reading strand is structured to reflect the major topic areas of the National Reading Panel Report (National Institute of Child Health and Human Development, 2000). Additionally, the ELA section described in the TEKS has been created to meet the Texas Education Code for Public Education Academic goals section 4.002 which states, "The students in the public education system will demonstrate exemplary performance in the reading

and writing of the English language," (Texas Constitution and Statutes, "Education Code", n.d.). Furthermore, students will accomplish the essential knowledge, skills, and student expectations for each specific grade level, which is outlined in the section titled "Knowledge and Skills".

Coinciding with the most recent revision of the ELA TEKS, was the consideration and reflection of an additional standard foci — The College and Career Readiness Standards (CCRS). The CCRS outline the concepts that are to be taught in public schools to help prepare Texas students for success in the workplace or in college or university courses.

### **History of the College and Career Readiness Standards**

The development of College and Career Readiness Standards (CCRS) had a forerunner called the American Diploma Project (ADP). It was a joint project launched in 2001 by an independent, bipartisan, non-profit education reform consortium of business leaders and governors called Achieve (Achieve, n.d.) in partnership with Education Trust and the Fordham foundation. This project was initiated in response to business sector concerns about the readiness of our high school graduates. Their concerns were based on university faculty and employers noticing variances in the preparedness of high school graduates and in response to research showing that up to thirty percent of high school graduates needed some type of remediation at the postsecondary level (Achieve, n.d.).

ADP aimed at more rigorous and consistent state standards so that a high school diploma would represent a more consistent educational value in terms of readiness for either college or a career. Texas was one of the initial partnering states on this project from 2002 to present, and in 2010 it was the only state identified as making full use of all indicators assessing college and career readiness (Achieve, 2010). Texas was also the first state to create and adopt College and Career Readiness Standards.

In an attempt to provide a world class education which prepares every student for success in postsecondary education or in a career, schools were provided the College and Career Readiness Standards (CCRS) (Texas Higher Education Coordinating Board [THECB] & the Texas Education Agency [TEA], 2009). The CCRS are organized around a framework featuring multiple depths of knowledge. This framework focuses on moving beyond subject matter and towards a deeper understanding of the structure of a discipline and how knowledge expands beyond a topic. The CCRS (THECB & TEA, 2009) are organized into the following four levels:

- key content (i.e., foundational ideas of a discipline);
- organizing components (i.e., subject areas and knowledge that organize a discipline around what students should be able to achieve);
- performance expectations (i.e., knowledge and skills that exemplify significant ideas of each organizing component as well as the contexts in with each

- organizing component can be present); and
- examples of performance indicators (i.e., examples of assessment for measuring performance expectations).

The four levels listed above provide a framework for the CCRS throughout all four disciplines addressed (i.e., English/Language Arts, Mathematics, Social Studies, and Cross-Disciplinary). In addition, THECB and TEA (2009) remind us that “generally, the more standards a student can demonstrate successfully, the more likely it is that he or she will be college and career ready” (p. iv).

### **Forming the CCRS in Texas**

According to the THECB and TEA (2009), the creation of the CCRS began with the passing of House Bill 1 during the Third Called Special Session of the 79th Texas Legislature. With the passing of House Bill 1, also referred to as the “Advancement of College Readiness in Curriculum”, the THECB and TEA were required to establish Vertical Teams within specialized content areas. The Vertical Teams were charged with the duty to develop college and career readiness standards in the areas of English/language arts, mathematics, science, and social studies. In their effort, the vertical teams reviewed research, exemplary College and Career Readiness Standards, and other standards developed by national subject matter organizations. They also studied reports, heard expert testimony, and collaborated with secondary and postsecondary faculty.

The first draft of the CCRS was posted for public comment in October 2007 by the THECB. Concurrently, revisions were being made to the standards based on feedback from the Commission for a College and Career Ready Texas. The second (and current) draft, incorporated revisions based on the feedback of both sources. THECB and TEA (2009) describe these standards as “what students must know and be able to do to succeed in entry-level courses at postsecondary institutions in Texas” (p. iii).

How does CCRS differ from previous high school graduation standards? THECB and TEA (2009) explain that, the CCRS serve a different purpose than high school graduation standards, which typically emphasize mastery of basic skills and knowledge, and not necessarily college and career readiness....the CCRS distinguish themselves from high school standards by emphasizing content knowledge as a means to an end: the content stimulates students to engage in deeper levels of thinking (p. iii).

Preparing students for success in the workplace or in postsecondary education is a current concern for not only for the state of Texas, but also the nation. Like the CCRS, the CCSS aim to prepare students to be successful after graduating from high school.

### **History of the Common Core State Standards**

While the CCRS set expectations for the end result, they do not address grade-

by-grade progression of student expectations. Similar to the TEKS, the CCSS *do* address grade-level expectations by describing what students should know and be able to do at each grade level. This leads to additional questions — how were the CCSS conceived, how were they developed, and how do they further differ from the TEKS and the CCRS?

Because the CCSS is a standards-based movement, they stem from the same historical events that shaped the TEKS at the national level. Most recently, the business leaders, the NGA Center, and CCSSO voiced concern about our ability to be globally competitive in the knowledge-based job market as the impetus for the creation of a set of common standards. They cite disparate standards across states as an obstacle. These governors and chief school officers saw the advantage in working together to examine international standards and the best standards of our states with the intent of more state-to-state consistency. Since all states are charged with creating more rigorous standards around the creation of high school graduates ready for careers or continued education, it made sense to create a network of shared resources which could be leveraged to create world-class learning objectives. So, these two non-partisan associations, the NGA Center and the CCSSO presented a proposal for all states to come together to develop a common set of standards aligned to various college and career readiness standards. The goal of this voluntary initiative is to provide a clear set of rigorous concepts and procedures that begin in early grades allowing time

for mastery by graduation so that all American students are prepared for college or careers when they leave their public schooling (NGA Center & CCSSO, 2010).

### **Developing the CCSS**

So how were the CCSS developed?

According to the Common Core State Standards Initiative Standards-Setting Criteria, CCSS were designed to be (NGA Center & CCSSO, 2010):

- Fewer, clearer, and higher, to best drive effective policy and practice;
- Aligned with college and work expectations, so that all students are prepared for success upon graduating from high school;
- Inclusive of rigorous content and applications of knowledge through higher-order skills, so that all students are prepared for the 21st century;
- Internationally benchmarked, so that all students are prepared for succeeding in our global economy and society; and
- Research and evidence-based (p. 1).

Since this was the first official effort to develop a set of shared standards, the process is not as transparent as the process for the TEKS. There is not one comprehensive document on the CCSS website that outlines this process. As co-author of the ELA Common Core State Standards and co-founder of Student Achievement Partners, Sue Pimentel, described the process of developing the CCSS as guided by three principles: (1) Each standard had to be

based on evidence of college and career readiness for literacy and mathematics; (2) The body of standards must focus on what matters most for readiness (so a small core of essential standards); and, (3) Local flexibility and teacher judgment must be maintained (NBC News, 2013).

Hired by the NGA Center and CCSS), Student Achievement Partners, David Coleman and Sue Pimentel, began the process by developing a draft during the summer of 2009 and managed the feedback and revision process throughout. Their work was supported by a work group of experts: researchers, educators from K-12, university faculty, as well as librarians. The initial draft was rejected by feedback groups and from September to November, a second draft was crafted based on more feedback from teachers and researchers. Once a more agreeable draft was completed, feedback groups were asked for additional input on the drafts, which included two 30 day periods of public comment. During this time, the National Council for Teachers of English (NCTE) was asked to offer feedback. In an [open letter](#) to members, then president, Kylene Beers (2009), explained that given the option to have some input or not, NCTE chose to take what little opportunity for feedback that was offered rather than have no input at all. Since CCSS adoption, both IRA and NCTE have offered guidance and support to help teachers navigate these standards. ([http://www.reading.org/Libraries/association-documents/ira\\_ccss\\_guidelines.pdf](http://www.reading.org/Libraries/association-documents/ira_ccss_guidelines.pdf))

<http://www.ncte.org/standards/common-core>)

One great criticism of the development of the CCSS is the lead authorship (Burkins & Yaris, 2012; Goldstein, 2012). Although Pimentel has a degree in Early Childhood Education and law from Cornell, she has never taught. Likewise, Coleman is a Rhodes Scholar, has an advanced degree in English from Oxford and philosophy from Cambridge, but he has never taught (Burkins & Yaris, 2012; Goldstein, 2012).

### **Organization of the CCSS**

The CCSS are comprised of the following three sections: a comprehensive K-5 section and two content area sections for grades 6-12. The first content specific section is for ELA, while the second is for history/social studies, science, and technical subjects. Each of these sections is then divided into strands. The K-5 and 6-12 ELA have divisions for Reading, Writing, Speaking and Listening, and Language. Additionally, the 6-12 history/social studies, science, and technical subjects section is divided into Reading and Writing. Each of these strands are headed by a strand-specific set of College and Career Readiness (CCR) Anchor Standards. The anchor standards are intended to reflect the broader readiness expectation of a literate workforce. These anchor standards are identical across all grades and content areas; and are followed by the specific standards for each grade within grades K-8, 9-10, and 11-12. The grade-specific standards translate the broader CCR Anchor Standard into



grade-appropriate end-of-year expectations. The standards have the following key features:

- Reading: text complexity and the growth of comprehension
- Writing: text types, responding to reading, and research
- Speaking and Listening: flexible communication and collaboration
- Language: conventions, effective use, and vocabulary

Three appendices accompany the document. Appendix A contains supplementary material as well as a glossary. Appendix B consists of text exemplars illustrating the complexity and range of reading for various grade levels along with sample performance tasks. Appendix C includes annotated writing samples for various grade levels.

### **Texas' Decision to Keep its Own Standards**

Texas, once an independent and sovereign nation, still has a sense of independence and periodically does not follow the same decisions as other state governments. For example, as mentioned earlier, the CCSS were co-authored by the NGA Center and the CCSSO. The NGA Center is a “bipartisan organization of the nation’s governors. Through the NGA Center, governors share best practices, speak with a collective voice on national policy and develop innovative solutions that improve state government ...” (NGA Center, 2011, Mission Statement, para. 1). The second authoring group, the CCSSO, “is a nationwide, nonpartisan, and nonprofit membership

organization. The only one of its kind organization to bring together the top education leaders from every state in the nation” (CCSS, 2013, “Our Promise”, para. 1). Keeping with our discussion of Texas periodically not following the same decisions of other state governments, it is significant to share that our state leadership is not participating in either of these two groups (Cavanagh, 2011a; Rich, 2012). In fact, Governor Rick Perry has not participated in the NGA Center since 2002 citing unnecessary spending for dues of over \$100,000 (Cavanagh, 2011a), and at the time of the development of the CCSS, our then Commissioner of Education, Robert Scott, declined participation in the CCSSO citing differences in philosophy in terms of state and local control of schools versus national control, as well as the \$60,000 membership fees (Cavanagh, 2011b). Additionally, our state leadership believes so strongly in state and local control of schools that [House Bill 462](#), passed in June of 2013, bans the adoption of the CCSS or assessments related to it and the use of its standards to provide instruction. The vote was overwhelming and bipartisan with 140-2 vote in the House, passing in the Senate as well, and signed into law by Governor Perry.

### **In Closing: Finding Common Ground**

While exploring the CCRS, TEKS and CCSS, it is critical not to confuse the concept of standards with curriculum. Standards are the learning goals that identify what students are expected to know and do by the completion of a

particular grade, or the “what” of education. With that said, its counterpart curriculum, or the pedagogical decision making and lesson design, is the “how”. While standards *inform* the curriculum in terms of expectation, they are not the curriculum. Much of the current criticism of the CCSS is the misconception that they are a *curriculum*. Although most of the states in our nation have adopted them, they articulate learning outcomes and emphasize the professional decision making of teachers and school districts on *how* they are implemented. In news articles reporting on the CCSS or the TEKS, they are often misinterpreted as curriculum. However, states and school districts design curriculum around them.

As is evident from the discussion here, Texas is a state with a history of setting educational precedents with the intention of providing the best possible learning opportunities for its children to meet and exceed their fullest potential to enter a globally competitive workplace. The CCSS shares the same goal. By building upon the higher standards of College and Career Readiness, both sets of standards work toward organized, clear, and rigorous learning objectives.

Each set of standards has a process of feedback and revision in their development. Although we would prefer that teachers have the initial and stronger authorship, input, and decision-making, it is apparent that teachers, parents, and other stakeholders have a forum for comment.

It is also noteworthy to recognize the earnest effort by states to find a common ground to thread our nation together on an educational foundation. While still early in the implementation process, there remain hurdles to overcome and lessons to learn with the hopes of strengthening the goal to prepare all students for success in the global society of the 21st century. It is an encouraging prospect that American students would have similar learning experiences no matter where they attend school in our nation. Through the Common Core State Standards, teachers across the country have the confidence that from state to state, consistency with learning outcomes is the overarching intention. Additionally, they have the same goals when collaborating with colleagues on their campus or around the nation and the benefit of resources published around national conversations to support these goals. Such an undertaking has the potential to close many gaps found across our nation that might have previously been formed due to logistics, economics, or ideologies.

As with our own curiosities, we have found that many Texas teachers often wonder how the CCSS compares to the standards adopted by Texas and why Texas isn’t part of it. Furthermore, while we acknowledge that Texas teachers and schools receiving public funds will not be using the CCSS, many of our private schools and teachers are. With all the attention placed on them, we want to be well informed. Lastly, we know that good literacy instruction is intentional and that the best prepared teachers inspire the best readers and

writers. In part two of this four part series, we will present and examine the TEKS, CCRS and the CCSS through the lens of student learning outcomes for developing skills for writing. In subsequent articles, we will examine the standards addressing student learning

outcomes for reading in respect to the topics of Close Reading and Text Complexity. We hope you'll contact us with feedback and questions you may have regarding these topics.

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