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Improving Comprehension of Science Content: Generating Self-Explanation Questions
and Creating Explanatory Answers

By

Peggie Clelland and Kay Camperell

Abstract

The emphasis on learning in many content area classrooms is heavily dependent
on remembering facts and memorizing definitions. Because of this, students often
achieve shallow levels of comprehension and are deficient in the skills necessary to
achieve deeper comprehension. Teaching students to generate self-explanation questions
and answers can improve comprehension related to teacher lectures and from reading
text. However, there are challenges related to implementing a research study to examine
the use of self-explanation questions/answers in classrooms. That is to say that translating
instructional strategies described in research literature into classroom practice is
problematic and challenging. The authors share lessons learned about working with
teachers and students as well as the amount of time it takes to implement a self-
explanation strategy into heterogeneously grouped classrooms using a gradual release
instructional model.

Introduction

*Ms. Johnson (pseudonym) begins her science class by asking her students to write
an explanation to the science question she posted on the board. "Explain how
commensalism and parasitism relationships may affect a population." Her students read
the question and then discuss it with their peer group while Ms. Johnson takes roll. She
quickly walks around the classroom to monitor student engagement. Her students then
write their explanatory answer following a rubric they were provided. They are
encouraged to include evidence, use their science vocabulary, and to use reasoning to
link the evidence to their claim (Moje, Peek-Brown, Sutherland, Marx, Blumenfeld, &
Krajcik, 2004). Once students finish writing their explanations, Ms. Johnson encourages
two or three volunteers to read their explanations to the class. She follows each
explanation with a brief discussion of the primary points and/or misconceptions. Students
save their work in their science notebook.*

*Next, Ms. Johnson quickly reviews students' homework assignments, answering
their questions. She has taught her students to use a self-explanation strategy as a way of
helping themselves better understand reading assignments from their textbook (Chi,
deLeeuw, Chiu, & LaVancher, 1994). Ms. Johnson encourages her students to write
down their questions and to attempt explanatory answers. Sam shared one of his
questions and explanations with the class: "Explain how a prey and a host are similar.
Prey and hosts are alike in the fact that both give food to another organism. Both are
harmed, but the prey is killed and the host usually is not. A tapeworm takes digested food*

from a host but does not kill it. The only way the host organism is harmed is in its lack of food because the tapeworm takes it. In parasitism the parasite lives off the host for its entire life. In predation, the predator lives off many prey. Both give food to another." Ms. Johnson recognized that Sam understood the basic premise of each relationship, but he was not able to clearly identify the fact that in predation, the prey does not give itself to its predator, but is involuntarily taken.

Ms. Johnson uses students' questions and explanations such as Sam's to introduce and connect previous discussions to the day's science lesson on the energy pyramid. Students are asked to read a short section in their science text and to discuss it briefly with a peer group (3-5 minutes). Ms Johnson then presents some new materials and follows it with a short demonstration of an energy pyramid. She concludes her lesson with a scenario in which students are asked to search the Internet for examples and then to write questions and to answer at least one of their questions with an explanation as their homework.

During a recent dissertation study (Clelland, 2006), we worked with middle school science teachers to integrate the type of self-explanation instruction described above into their own lessons. We had high expectations that the teachers would see the value and importance of integrating a self-explanation strategy into their daily instruction. However, even though we worked with the teachers for over six weeks, they never seemed to completely invest in the strategy. Moreover, we rarely saw instruction like Ms. Johnson's in the classrooms we observed when we were trying to identify teachers who would be willing to work with us on the study. Emphasis in most of the classes was on rote learning, which leads to shallow knowledge. Shallow knowledge results from classroom practices in which teacher lectures are the primary delivery system and memory tests are the primary assessment tool (Graesser, Person, & Hu, 2002). In most cases, the teachers' questions required only single word or short phrase responses that tapped factual recall (e.g., multiple-choice, true-false, fill-in-the-blank) rather than deeper conceptual understanding that involves students in generating inferences, problem solving, reasoning, and connecting ideas they were learning with their background knowledge (Graesser, Swamer, Baggett, & Sell, 1996; Graesser, Person, et al., 2002; Graesser & Olde, 2003).

At our 2005 ARF session, we set out to present the results of Peggie's dissertation research. Interactions with the audience led to an expanded discussion on translating theory and research into practice. The majority of our session focused on the difficulties of conducting research in classrooms. The major purpose of the article, therefore, is to reflect back on this discussion and present here what we learned about implementing self-explanation question/answer instruction in middle school classrooms. We begin, however, by briefly reviewing the comprehension model that served as a theoretical framework for the study and past research on self-explanations and self-questioning.

Theoretical Framework

To frame our research, we used Graesser's and his colleagues' theory of comprehension (Graesser & Olde, 2003; Graesser, León, & Otero, 2002; Graesser, Swarmer, et al, 1996) because of its emphasis on the importance of *why-questions,* or higher order questions in comprehension. The theory corresponds with an extant group of hybrid processing models that incorporate both symbolic and connectionist computational approaches to simulating comprehension processes (Graesser, Leon, et al., 2002; Graesser, Swarmer, et al., 1996; Kintsch, W., & Kintsch, E., 2005; McNamara & Kintsch, 1996; Singer & Kintsch, 2002). In these theories, readers construct the meaning of a text at multiple levels that are used to differentiate remembering from learning. Graesser and his colleagues stress the importance of readers asking and answering why-questions to get at the meaning of text beyond the words on the page (i.e., the surface code) and the literal level meaning of a text (i.e., the text base). They explain that asking students low-level, factual questions induces superficial processing because it focuses students' efforts on *remembering* facts and ideas (i.e., the surface code and text base) rather than *learning* new ideas.

Students who achieve deep levels of comprehension, on the other hand, are able to link multiple ideas within and across sections of text with their background knowledge, particularly prior knowledge related to the subject matter of the text (Graesser, McNamara, & Louwerse, 2003). To help students achieve deeper understanding, Graesser, Person, et al. (2002) argue that teachers need to ask and students need to learn how to ask themselves *why-questions* that induce them to actively explain text ideas to themselves in order to form situation models. Students who engage in this type of processing learn from reading rather than simply remembering what they read: They are able to analyze and synthesize text information and make inferences that help them integrate what they read with other related ideas.

Connecting this back to our classroom scenario, students who focus their comprehension efforts on remembering what they read may simply memorize definitions for the words *predator* and *prey*. In contrast, students who learn conceptually are able to decontextualize the information, link it to relevant concepts they have learned previously, and apply their new knowledge. An example of this may be a student who is able to explore the predator/prey relationship more broadly, explaining that when a food source within a predator/prey relationship decreases, other predators within the food chain loose their food sources, thus creating new problems.

Self-Explanation and Self-Questioning
Recently, the National Reading Panel (NRP, 2000) report suggested that self-questioning is one approach that promotes deeper understanding. Our review of the self-questioning literature led us to research by Chi (2000) concerning the effects of self-explanation on learning and to King's research (1989, 1990, 1992, 1994) on the effects of teaching students to ask themselves questions as they read.

Chi, Basok, Lewis, Reimann, and Glaser (1989) and Chi, de Leeuw, et al., (1994) found that students who generated self-explanations learned more from reading. These researchers examined the effects of having undergraduate students think aloud as they

worked out examples of physics problems and having junior high students think aloud as they read a biology text. In both instances, the researchers found that students who explained how text ideas connected with prior knowledge learned more because they stopped and attempted to reconcile what they already knew with what they read. Chi (2000) suggests that self-explanations mediate learning if the explanations lead students to interpret what they read so that they process the information as new concepts and principles rather than as facts to be remembered.

King (1990, 1992), on the other hand, studied the effects of having elementary and middle school students generate self-questions over content presented via lectures. Results of her research demonstrate that an explicit instructional model can be employed successfully in classrooms to teach students how to ask and answer explanatory questions. She taught students how to generate questions that integrated new information with prior knowledge, such as how and why questions, and how to explain new ideas to each other. Students asked and answered each others' questions in peer discussion groups. They were provided question stems to help them generate questions. King found that prompting students to explain new ideas and to ask and answer questions that required them to integrate new ideas with prior knowledge achieved higher scores than untrained students on both literal and complex understanding (i.e., inferential, explanatory, and knowledge extending) questions.

Together, results of this research (Chi, Bassok, et al., 1989; Chi, de Leeuw, et al., 1994; King 1989, 1990, 1992, 1994) suggest that students who generate self-explanations achieve deeper levels of understanding and learning. Instruction that involves this form of self-explanation creates opportunities for students to (a) interact independently with text (Graesser, Person, et al., 2002; Chi, 2000; King, 1989), (b) collaborate with peers (King, 1990; King, Staffieri, & Adelgais, 1998), and (c) ask and answer their own questions (Graesser & Olde, 2003; King, 1989, 1992).

Self-explanation is a self-directed cognitive process that requires learners to consider what they hear or read and to connect it to their background knowledge – forming a deeper level of understanding (Graesser, Person, et al., 2002). Answers to self-explanation questions include a statement that illustrates students' understanding of a concept or principle, evidence to support their claim, and reasoning that links the evidence to the claim (King, 1994; Moje, et al., 2004). When students use this strategy, they build their comprehension of text at a deeper level.

In many of the middle schools that we observed, teachers primarily lectured and gave memory tests. We were interested in an approach that would engage students more actively in their own learning and that promoted more conceptual learning. Thus, we attempted to combine Chi's (2000) work with self-explanation and King's (1990, 1992, 1994) self-questioning approach to examine their effects on students' comprehension.

Examining Self-Explanation in Classrooms

Our purpose is not to present a full report of Peggie's study (Clelland, 2006). We will, however, present a brief overview of the study and results. We began with a pilot study in 4 eighth-grade science classrooms in which students were taught how to generate self-explanation questions for reading assignments about the rock cycle. We found that students answered essay questions with one or two words and rarely explained enough to demonstrate they could apply information that they had studied about rocks and minerals. In the subsequent formal quasi-experimental study (Clelland, 2006), we worked with 3 groups of heterogeneously grouped eighth-grade science students who studied an ecology unit. Teachers of each group presented some of the information via lectures and by having students read from their science textbooks. Students also engaged in other classroom activities such as creating posters, watching teacher demonstrations, and viewing videos related to the science content. One group was taught only to generate self-explanation questions. A second treatment group was taught how to generate self-explanation questions and how to create answers following a rubric as a guide. Our third group served as a comparison group. They received the same science instruction as the other 2 groups, but they were not taught how to generate self-explanation questions or answers. They were, however, instructed by their teacher to write some questions (without instruction on how to write them) that they could use in a class review at the end of the unit. Students in each class worked in small groups to generate and answer each other's questions. The study was conducted over a 6-week period in which four quizzes were administered that included both multiple-choice memory questions and short essay questions that required students to apply ideas they had studied. A maintenance test over different content was administered two weeks following the study.

A pretest was used to assess students' prior knowledge of science content, and these scores served as covariate in analyses of the data. Here, we focus on the analyses of the essay quiz scores. A MANCOVA on the essay quiz scores revealed a significant difference existed among the groups (Wilk's Lambda = .671, $F(8,120) = 3.308$, $p = .05$). Thus, individual ANCOVA tests were performed and revealed statistically significant differences on the third quiz ($F(2,63) = 4.453$, $MS = 102.384$, $p < .05$) and the fourth quiz ($F(2,63) = 6.876$, $MS = 120.790$, p < .05). Individual ANCOVA for the maintenance essay test was also significant ($F(2,63) = 4.853$, $MS = 193.028$, $p < .05$). Bonferonni post hoc tests revealed that students in the question/answer group achieved higher scores on the third quiz and students in both the self-explanation question-only group and the question/answer group outperformed the comparison group on the fourth quiz and the maintenance essay quiz. By the third quiz, we began to see consistent improvement on our essay tests in both the question/answer and question-only groups. Although our results were mixed, we were encouraged by them because they suggest that teaching students to ask self-explanation questions improves their comprehension of science content learned via teacher lectures and from reading their science text. Nevertheless, we experienced many challenges implementing a model such as this in heterogeneously grouped science classrooms. The remainder of this article focuses on these challenges.

Lessons Learned

Translating instructional strategies described in the research literature (e.g., King, 1992, 1994; Chi, 2000) into classroom practice is problematic and challenging. Between our preliminary studies and our formal study, we worked with 10 middle-school science classrooms in both Utah and Washington, and we encountered similar problems in all of them. Teachers were unprepared to implement questioning approaches that required more than simple recall. Students resisted doing the work involved in asking and answering conceptual questions, and it took more time than anticipated before the effects of using the strategy were reflected in students' scores on essay tests.

What We Learned About Working with Teachers

The most encouraging aspect of both our pilot efforts and the formal study was how willing the teachers were to be part of our research. We worked with 3 wonderful teachers who were excited about collaborating with university faculty and expressed how pleased they were to be able to offer us their help and support. Still, the teachers we worked with were not well prepared to teach students how to generate self-explanation questions. Furthermore, we were not sure if the teachers themselves knew the difference between memory level questions (i.e., recall or simple knowledge questions) and Bloom's (1956) higher-order questions (i.e., application, analysis, synthesis, and evaluation), even though we had spent several hours showing them examples of different question types and talking about differences among them. The teachers struggled with asking higher-level questions. This became strikingly apparent when they had difficulty using student-generated questions to model examples and provide feedback about the questions at different levels. The teachers also often presented examples of higher-level questions that actually were questions that could be answered easily by explicit statements from the text, lectures, or videos.

We also spent several hours over 3 days explaining and demonstrating strategy instruction and talking about a gradual release model, which involves informing students of a particular strategy, including how to employ the strategy and in what cases the strategy might be useful. (Duffy, 2002; Pressley, et al., 2003). Nevertheless, the teachers we worked with seemed uncomfortable employing strategy instruction using a gradual release model. They instead told students to ask higher-level questions without showing them how to do so. Indeed, the teachers were not used to modeling effective questions, guiding student practice, and monitoring student progress while providing feedback to help students improve their questions. Clearly, the length of instruction we provided on asking higher-level questions and the training we gave on strategy instruction were not sufficient. Once we realized that the teachers were unable to provide this instruction effectively, Peggie made the decision to provide instruction related to the self-explanation strategy, and the classroom teachers focused on delivering content. Surprisingly, in the studies we reviewed, classroom teachers were rarely provided with more than a few hours of training.

What We Learned about Working with Students

According to Wigfield and Tonks (2004), intrinsically motivated students possess a desire to learn and prefer to be challenged and engaged. We found, however, that students in Peggie's study (Clelland, 2006) resisted the extra effort required to ask and answer questions that involved explanations. They were more familiar and comfortable with lectures and teachers telling them what they needed to know (e.g., science facts and vocabulary definitions). The students we worked with in both our preliminary efforts and Peggie's formal study wanted to know only what they were expected to know for the tests. They often commented that what we were asking them to do was too hard, and the novelty of participating in a study kept them on task for only the first week of the formal study. One student, for example, withdrew from the study thinking that he would not have to write and answer any more questions. He failed to realize that he would still be responsible for learning the science content covered in the remainder of the study. Another student claimed that he could not believe a university would "let some one do research like this"! Eventually, we had to give students participation points for the questions they generated, with memory questions receiving one point and self-explanation questions higher points. Indeed, besides the participation points, the only leverage we had was that students knew they had to pass tests over the content as part of their science grade. Perhaps researchers in the studies we read did not encounter this resistance, but we find it difficult to think that this strategy was more effortful than the think-aloud procedure students were taught in studies by Chi (2000). Indeed, in the one of these studies, (Chi, de Leeuw, et al., 1994) eighth-grade students had to stop and think-aloud after every sentence they read!

In addition to the resistance we encountered from students, we also found that it took four weeks before students' comments in the treatment groups indicated that they no longer required prompt cards to help them generate questions. Moreover, it took two weeks longer to see improvement in students' answers to essay questions. As previously noted, one treatment group was taught how to generate self-explanation questions only, and the other treatment group was taught how to generate self-explanation questions and how to write explanatory answers. In both instances, students essentially were required to write in a new genre (an explanatory answer), and it took the entire six weeks of the study before we saw consistent improvements on students' essay tests. Again, we could not have anticipated this from the studies we reviewed (Chi, 2000; King, 1990, 1994) in which the longest intervention only lasted four weeks. Thus, students in Peggie's study (Clelland, 2006) required more time to earn how to produce in writing effective explanatory responses.

Discussion and Implications

Conducting research in classrooms appears straightforward and even simple in published articles on classroom research. We found just the opposite to be the case. Teachers were unprepared to implement a new instructional approach without more extensive opportunities to practice than we provided. Once the novelty of participating in a study wore off, students resorted to previous learning routines, and it took more time than in other studies for the effects of using the self-explanation strategy influenced student performance on essay tests. Of course, all obstacles cannot be anticipated when

conducting classroom research. Nevertheless, researchers, particularly doctoral students, need to be prepared for problems like the ones we encountered.

We selected Graesser's (Graesser & Olde, 2003; Graesser, León, et al. 2002; Graesser, Swamer, et al., 1996) theory of comprehension as a theoretical framework because his research highlights the importance of students' asking themselves explanatory questions. Although there are important distinctions among the various comprehension theories (e.g., Kintsch, 1989; Van den Brock, Virtue, Everson, Tzeng & Sung, 2002), most distinguish between understanding as remembering text information, a shallow level of comprehension, and understanding as learning from text, a deep level of comprehension. This distinction was another reason for drawing on Graesser's theory. His research, as well as other psychologists' and cognitive scientists' research, is designed to examine if effects they have obtained occur across different subjects and contexts. Their applied research is not designed to present and assess fully fleshed-out methods for classroom instruction. Thus, such theories are inherently limited as a resource for addressing motivational issues that may be central to sustaining student engagement over lengthy time periods.

Designing research that addresses student motivational issues, however, is still problematic. Concept Oriented Reading Instruction (CORI), for example, is based on the premise that hands-on activities and other types of complex and engaging instruction will motivate students to use specific learning strategies meant to improve reading comprehension (Guthrie, Wigfield, & Perencevich, 2004). Although Guthrie and his colleagues (Guthrie, et al., 2004) have provided numerous descriptions of the CORI framework to enhancing student engagement and motivation for reading, the time and money required to implement such an approach in secondary classrooms is probably prohibitive for many teachers and for doctoral students. The teachers we worked with were concerned about student motivation and interest, and they included a variety of science demonstrations and short videos during the course of the study. They also allowed students to work collaboratively in small groups to ask and answer questions. But, the resources to purchase the wide variety of material needed to conduct the kinds of student-centered inquiry described in the research on CORI were simply not available. If doctoral students or other classroom researchers are not involved with funded research programs that finance the time and material it takes to teach strategies within a CORI framework (Guthrie, 2003), then they need to pinpoint other ways they can foster student engagement when they design instructional research. As noted by Wigfield and Tonk (2004), extrinsic rewards may not undermine intrinsic motivation if the extrinsic rewards inform students about how well they are doing on assigned tasks. Thus, point systems like the one Peggie employed might be useful as long as students do not view the points as only a method for controlling their behavior.

We are still frustrated that the science teachers we worked with experienced so much difficulty in asking higher-level questions and providing comprehension strategy instruction. The teachers Peggie worked with needed much more preparation before the study was begun. Their struggle, however, is another example that many students are not being taught comprehension strategies to help themselves learn from content area

materials because the teachers do not know how to implement such instruction in their classrooms (e.g., Kamil & Bernhardt, 2004; Sweet & Snow, 2003). Thus, we need to intensify either our staff-development efforts with content area teachers or recruit more of them into graduate reading programs that will provide them with more in-depth preparation for teaching students strategies for learning content area material.

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Defining Literacy Self Images: Using Digital Storytelling to Empower Preservice Reading Teachers As Strategic Problem Solvers

Jacqueline K. Collier

Abstract

Development of preservice teachers emphasizes the content and pedagogical knowledge of instruction and an understanding of the decision making processes of teachers. This knowledge develops voice in the educational world they are entering. This research examines preservice teachers' awareness of their literacy autobiography and the experience of struggling with technology to understand themselves as strategic problem solvers. The study has three components: the writing process to develop a literacy autobiography, developing technologically challenging digital storytelling, and examining connections between the literacy autobiography and technology production on views of themselves as strategic problem solvers. Results of the study indicate that writing literacy autobiographies and designing a digital storytelling supported a sense of teachers as strategic problem solvers.

Intellectual development is a journey requiring effort, it is not an inherent gift one does or does not possess. One chooses whether to embark on the journey and applies one's intelligence, among other personal qualities, to the journeying (Hill, 2000).

Schools of education are working to prepare preservice teachers to take leadership roles in the intellectual journey toward building better schools. Strategic problem solvers who understand their own decision making processes are needed to proceed with this journey. There are contrasting forces at work in many schools that struggle for control of decision making processes as administrators search for the silver bullet in literacy instruction. The first move is driven by the focus of a cover the material mentality to drive test scores higher (Reeves, 2004). In this approach materials and programs are handed to teachers with all decision making provided about what to do and how to do it. The message is to simply apply the lessons and learning will occur. Of course this does not happen and students continue to struggle to learn to read and teachers are frustrated as one more program comes and goes with immense amounts of time and energy spent. What's missing in this quick fix approach is the role of teacher as strategic problem solver (Wold, 2003) focused on implementation of instruction's best practices. The second force is also driven by the need for high achievement, but the focus is on diagnostic teaching that relies on the teacher's knowledge base and ability to be critically reflective in order to make strategic decisions in instruction (Brookfield, 1995). Lyons and Pinnell (2001) point out teachers as strategic problem solvers see each new step in instruction as a journey of intellectual development better informing their decision making. Both approaches have the goal of students as successful, high achieving readers, writers and thinkers. They are very different, however, and developed around very different philosophies of the teacher's role.

This study examines preservice teachers' changing views of themselves as readers, writers and strategic problem solvers as they write their literacy autobiographies and struggle

with the technology product of digital storytelling. With the intent of focusing on the awareness of themselves as teachers who are strategic problem solvers, this research is grounded in inquiry of the role of teacher autobiography in developing self-awareness, the role of strategic thinking and of teacher as problem solver. This study introduces a framework developed by the author to articulate personal levels of learning required to be a strategic problem solver.

Frameworks for Understanding

Literacy Autobiography

The research on preservice teachers' awareness and exploration of their autobiography as consumers of literacy clearly demonstrates that this is a positive move in analyzing their beliefs (Pinar, 1986). Preservice teachers' prior experiences affect the way they approach new situations as teachers (Posner, Strike, Hewson, and Gertzog, 1982) and exploring their life experience promotes a deeper understanding of how perception impacts their role in the classroom (Woods, 1987.) Individuals' self-beliefs about personal capabilities are also critical elements in the decision making processes (Bandura, 1989). What happens, however, when these beliefs stay buried under layers of either positive or negative school experiences? It is the premise of this researcher that mining for those self-beliefs about literacy capabilities and experiences that will impact actions begins with a combination of metacognitive reflection about self and a thorough understanding of one's individual literacy history. This metacognitive process forms the foundation for strategic thinking and problem solving.

Strategic Thinking

Constance Weaver (1998) explains strategic thinking as the purposeful thinking through of the problem, the data, the skills, and the solutions. She particularly focuses on plans for carrying out the mental processes of reading, but in this study the process is extended beyond the area of literacy. Strategic thinking is a conscious invitation to growth and a time to develop personal control and empowerment (Harst & Leland,1998). The goal is to prepare reflective teachers who think strategically in order to determine student and even program needs and who use methods and materials effectively to meet those needs (Daniels and Bizar, 2005). However, the ability to take on the role of articulating the focus of such literacy program, the ability to demand that neither materials (basals for example) nor organizational structures (prepackaged programs for example) but teachers be the determiner of needs demands a professional who has not only a strong knowledge base but also a strong understanding of self and strategic problem solving.

The notion of strategic thinking has been explained as awareness of the process of thinking (Dowhower, 1999), as being purposeful and independent (Routman, 2000) and that the learner must not only knowing but know that they know (Butler, 1990). Alexander and Jetton (2000) refer to reading strategies as specialized sets of mental procedures that readers use to facilitate their understanding of text. Using these ideas to explain strategies to preservice teachers, this researcher refers to the strategies used by readers and writers as "invisible mental processes" since they are not immediately visible to teachers new to this notion of mental

procedures. This definition of strategies as invisible mental processes is used here as a foundation piece in understanding the role of developing awareness of problem solving skills.

Strategic Problem Solving

The personal history of learning to be a literacy problem solver is lost to time for most teacher candidates. Pre-service teachers possess the automaticity of strategies needed to read and write so recalling their own literacy beginnings does not necessitate their understanding the mental processes involved. Developing awareness of the steps of mental processes and problem solving is then recaptured by tackling a novel, unpredictable, and potentially stressful project (digital storytelling) and achieving a level of success (Schunk, 1984; Sousa, 1995). Strategic thinking is promoted and discussed as candidates develop this complex product with the hope of developing awareness of problem solving.
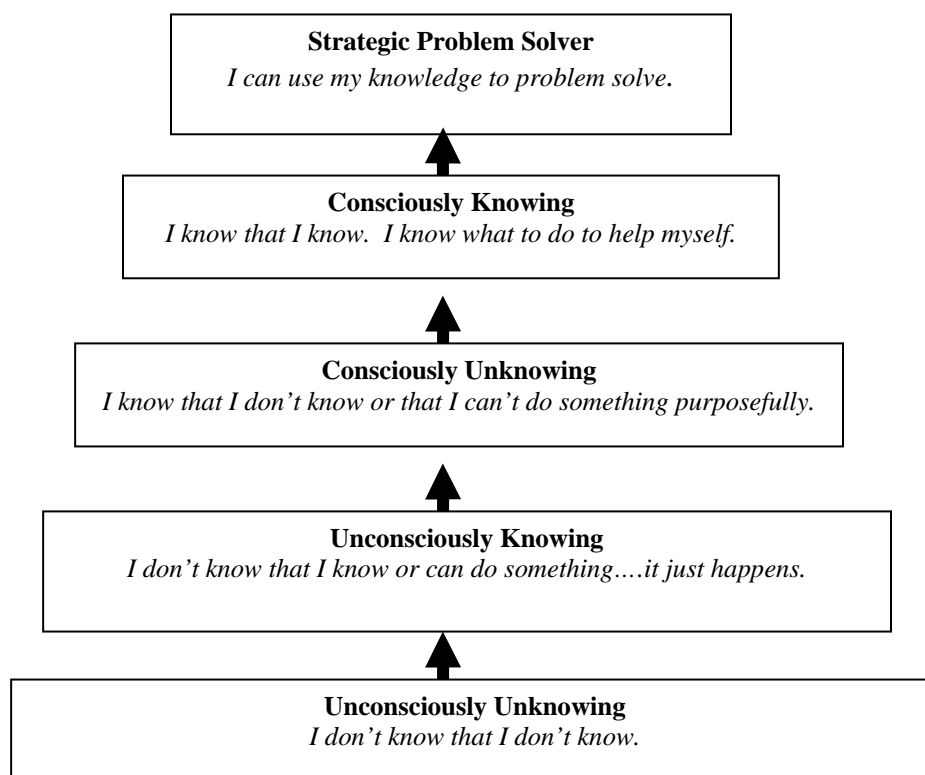
.

As a step in understanding this model of connecting strategic thinking and problem solving it is helpful to examine this framework in another common area. Everyone uses strategies to accomplish everyday problem solving tasks such as driving a car. Strategies are also used for specialized tasks such as surgery, defending a client, and teaching students. There are levels or stages of problem solving prowess (see Figure 1) that are determined by understanding of self, knowledge of procedures, and awareness of strategies.

Driving a car is a problem solving act. A novice driver understands the basics of starting the car, the rules of the road, ways to stop the car, and how to avoid collisions. A more experienced driver senses the right behaviors, learns how to be alert to problems, and usually avoids accidents even though the efforts may not be conscious. Most drivers have found themselves daydreaming as they proceed on a well-traveled route to work, yet arrive safely. The highly experienced driver is more strategic and understands the complexities of driving, how to react on icy roads, and multiple ways to correctly and quickly react to critical situations. Whether this driver makes decisions consciously or unconsciously determines the level of strategic problem solving involved. The ultimate might be winning Nascar drivers who know how to drive and problem solve strategically in order to be successful. They know and they know that they know and can be strategic problem solvers.

This understanding and awareness of strategies and self are supported by reflection. This model of strategic problem solver built on the awareness of strategies and self explains how students and teachers become stronger problem solvers. Using this model one can discuss novice teachers' growth along a continuum of seeing themselves as problem solvers. Novice teachers often have the "rules of the road" when they enter their first classroom. They have a beginning knowledge of classroom organizational structures, some experience with classroom management tools, knowledge of content, processes that have been modeled and experienced, and products they have seen, read about or created themselves. More experienced teachers do good things for students, often because it intuitively feels right. However, the decision making may not be consciously focused. The teacher may be caring, intuitive to student needs, and make good decisions but the response to "why" might be, "It was just the right thing to do."

Teachers make decisions based on a variety of factors, but they are strategic problem solvers if they are aware of the knowledge, skills, attitudes, background, and issues involved and can articulate them. Conscious awareness allows teacher to analyze actions and to use strategic problem solving with instructional decisions (Lyons, 2003). The quickness and correctness of the response may be based on experience and time, but the process is based on awareness of the role of strategic problem solving. The willingness to articulate those processes and beliefs may be based on personal self efficacy. The ultimate example might be a Master Teacher who can make decisions based on the ongoing assessment of student behaviors and can discuss the why's of the decisions with others so that they are replicable in a positive way.

Figure 1: Problem Solving Taxonomy

Strategic Problem Solver
I can use my knowledge to problem solve.

↑

Consciously Knowing
I know that I know. I know what to do to help myself.

↑

Consciously Unknowing
I know that I don't know or that I can't do something purposefully.

↑

Unconsciously Knowing
I don't know that I know or can do something….it just happens.

↑

Unconsciously Unknowing
I don't know that I don't know.

Jackie Collier Ph.D. 1998

Study Design

Overview of Study

In an effort to break away from the apprenticeship of observation model (Lortie, 1975) where past practices are simply repeated to a model of reflection in action (Schon, 1983) Early Childhood Education preservice teachers produce a literacy autobiography in digital storytelling form during their writing methods course. This technology product is new to each of the preservice teachers and serves as an opportunity to experience the struggle of new learning and focus on writing skills. The goal of this exploration is for participants to move toward becoming

strategic thinkers and problems solvers. This would then open the pathway to discussing the role of strategic thinking and problem solving in teaching literacy to young children.

Participants

This midsized state university in the Midwest is most often attended by candidates whose parents' homes are relatively close to campus although approximately 50% live in campus or off campus housing. The study involves one hundred-four pre-service Early Childhood Educational candidates including ninety-five females and nine males. Writing entrance scores on the Praxis I test for this group of students range from average to slightly below average with most scores ranging from 173 (minimum for entrance to the program) to 176. Two students' scores are below 173 and require specific support requirements and one student score is 180. Reading scores are just slightly higher than writing scores. These teacher candidates are in their final placement and two quarters from graduation. The 4.5 quarter hour course meets once a week for three hours and forty-five minutes. The participants have worked with the researcher during the previous quarter in a reading methods course.

Methods

This study took place over three quarter periods from January through December. Candidates who participated in the study were a part of two literacy methods courses. The first set of participants was involved in the Winter and Spring terms consecutively. The second set of participants was involved in the Spring and Fall quarters consecutively. The first quarter course is Reading Methods and Materials. The second quarter course is Writing Methods and Materials. The initial survey of attitudes toward literacy takes place during the beginning of the first quarter and is repeated at the end of the second quarter. Additional information is gathered through in-class reflective journal entries, personal student feedback, WebCT electronic responses, in-class comments and discussions, class exit cards, individual interviews, and end of course final anonymous reflections on the process and the product.

Qualitative data was collected through written responses in and out of class to allow for immediate responses and for those that developed with reflection after class events. These comments were first categorized by positive and negative toward the experiences, toward learning in general, toward learning about the processes of reading and writing, and toward learning about the processes of teaching reading and writing. These were then categorized again by comments that demonstrated awareness of the levels of problem solving (see Figure 1). These findings were used to lead discussions in the post course interview and to design the end of course survey on the experience.

Study Phases

The first phase of the study occurs at the beginning of the Reading Methods course as students fill out a survey of their perceptions of themselves as readers and writers. This information is discussed in class and the data is kept for later use. In the Reading Methods course students are introduced to the concept of reading strategies and strategic thinking and problem solving. The idea of teacher as problem solver is discussed.

The second phase of the study occurs during the Writing Methods course and focuses on the writing of a personal literacy autobiography. Students are guided through the writing of literacy autobiographies over the ten-week quarter. The process moves from modeling, revising, storyboard development, and to production of a final copy. In-class minilessons model the craft of writing, using engaging leads, strong endings, title options, voice in writing, and the use of descriptive language. Students each take part in the minilessons and are expected to try their hand at revising their writing. Evidence about student impressions of the processes is gathered through submission of autobiography drafts, individual reflections on WebCT, in class reflections and discussions and class exit cards.

The third phase of the study focuses on the development of the digital storytelling to be presented to the class the last day of the quarter. Digital storytelling is a new technology tool for all students in this study. Product development is supported by a technology faculty member who makes in-class visits to introduces the process, models open source sites for music and visuals, and provides assistance in problem solving the glitches of working on a challenging technology product. Students are encouraged to visit the university technology support system which they are aware of from other coursework. Throughout the quarter several students who are highly interested in technology become sources of support for others. Evidence is gathered on this part of the study through an anonymous survey at the end of the course, through in class discussions, and WebCT written reflections.

The fourth phase of the study includes gathering documentation about candidates' views of themselves as readers and writers, the impact of understanding their literacy autobiography on their role as teachers and candidates' views of themselves as strategic thinkers and problems solvers. Data is gathered about this part of the experience through an end of quarter survey, written reflections and post quarter personal interviews.

Findings

Perceptions and Reflections of Literacy Selves

The first part of this study was to document candidates' perceptions of themselves as readers and writers. As part of understanding themselves as literacy consumers and to better understand their literacy selves, candidates were given the same survey before and after taking the two quarters of literacy classes and working through the autobiography and digital storytelling project. The survey asks if they see themselves as readers and writers. Before the twin quarters 50% saw themselves as readers and writers. However, 40% saw themselves as either non-readers or non-writers and 10% saw themselves as both non-readers and non-writers. At the end of the twin quarters 89% saw themselves as readers and writers. Only 10% saw themselves as either a non-reader or a non-writer and only 1% said they are still a non-reader and a non-writer.

The group as a whole was originally unsure how students learned to read other than sounding out words and learning letter sounds. As candidates wrote about themselves as literacy learners in their literacy autobiographies, however, they dug into memory boxes from home, interviewed parents, siblings, and friends and filled in many of their missing gaps with

information and recalled memories. An often stated comment from candidates was, "I had forgotten all about that until now." Their recollections led them to discussion about how they learned to read and write, successes and struggles, a great deal of empathy for each other, and a sense that they had learned a lot about how to approach the teaching of reading and writing in learner centered ways and were indeed becoming problem solvers through building their knowledge base.

Candidates' recollections of the forces that helped shape their skills and attitudes about literacy were varied. Most stated that they did not remember how they learned to read exactly, but with some probing the majority stated that they began to learn to read and write at home with their parents. There were those, however, who came from environments where literacy was not a priority. This was an epiphany for some candidates. One candidate wrote, "I had no idea that Susan (pseudonym) came from a family like that. I thought that only poor and uneducated families did that (put down reading and writing as a waste of time.) She's so successful. It really opened my eyes to possibility." School experiences and particular teachers were also mentioned by almost everyone-some were positive and some were negative. These shared experiences also had a profound effect on the group. "I never want to be that teacher who puts a student down or tells someone they 'can't do it.'…I've seen what a lasting effect that has on people." This comment and similar ones were made by several candidates after they viewed the digital stories. One candidate expressed what others also said, "What helped me learn is what will help my students learn. This experience has expanded my understanding of the processes of literacy. I will use this information and these tools." One candidate told how the focus on strategic thinking and the project affected her current work, "I'm finding that I'm reading better now that I'm aware of my own processes. I've always had trouble with comprehension. I'm improving. I'll share this with children."

Candidates' anonymous comments were varied but mostly positive regarding this process. At the end of the project they all stated that they felt very proud of their efforts although several said that they planned to continue revising--it wasn't quite right yet--the sign of a true writer. Janice wrote, "I wish I had learned this process long ago. It has changed my mind about writing and teaching writing." Another candidate said, "It was powerful to see my ideas develop, grow, change as I went through the process." A recurring theme was the initial assumed lack of need for the writing process. "Experience has taught me that I don't need the process of revision and problem solving. I write the night before and get A's. No one has ever shown me the value of the process before." One candidate focused on an additional value. "The greatest difference is that the emphasis was on the process not only the product. That makes a huge difference."

Using Problem Solving Skills to Learn

The second part of the study focused on the impact of developing the technologically challenging digital autobiography on candidates' understanding of themselves as strategic problem solvers. Candidates' comments on the technology product have been mixed over the two quarters as the teaching of the technology itself is being refined. Initially a great deal of freedom and lack of organizational structure in the design and delivery proved very frustrating for candidates. That delivery has moved to a more guided scaffolding process with positive results in candidates' feelings of success. Although no direct connection to strategic thinking and

7

problem solving was stated in reflective comments, many candidates referenced themselves as problem solvers and the role of support in their attaining success.

Some candidates loved the challenge and wrote, "It was fun and exciting. I had never done this. Hard, but I did it with some help. I felt very proud." A candidate from the first group returned to tell me that, "Now that some time has passed I see some possibilities for this. I just couldn't see making second graders cry over doing this—and believe me I cried. Sometimes you have to walk away to really see things." Feelings of accomplishment were shared, "I had no idea I could do this, but I did. It helped to have it broken down into parts and pieces and to have so much help. I guess learning to read and write is like that. Is that why you had us do this project? Crafty!" A less enthusiastic candidate wrote, "It was so hard for me to work on this project, feel like I had no idea what I was doing and then not have it work in class. I don't think I'll ever use it." For some there were benefits outside of just this experience. "I've learned a new way of presenting information. I'm going to make gifts with this for my mom—she already cried when she saw this one. I hope I can make my students get this excited about learning." Another recurring comment was the focus on a product with a true purpose that they can see using in their futures as teachers. Several candidates wrote, "There was an authentic purpose. That was important."

Strategic Thinking and Problem Solving

The third part of the study was to look for candidate connections between the development of their literacy autobiography in the digital storytelling format and the way they see themselves as strategic problem solvers. Candidates overwhelmingly saw clear connections. All but two responses on exit reflections showed some kind of link between the experiences and personal understanding about problem solving in literacy instruction. Connections between problem solving and personal self-efficacy were strongest in the comments about the digital storytelling. Jonothan wrote, "I found I had to really think things through in doing this project—step by step I had to be the problem solver. Each time I worked through something I knew more and felt stronger. Learning anything goes through the same process, doesn't it?"

Candidates' comments on the writing process also focused on the process of problem solving and strategic thinking. Candidates constructed prewriting and an initial draft with the assumption (shared much later) that they were finished. Through the in-class minilessons the craft of writing was discussed, modeled, and used with their draft copy. Although the choice was always theirs whether to revise or not, everyone's autobiography went through major alterations. Many changed totally from beginning to end product. This process accomplished two purposes; candidates experienced a writing process to use in their own classrooms, and they were forced to think strategically and to problem solve with each mini-lesson.

There were numerous comments about the impact of strategic problem solving on the teacher's role as supporter and nurturer in the classroom setting for all students. One candidate stated, "I understand myself better. I have a better understanding of my own experiences and their impact on me as a learner. Activities and assignments that put us back in the shoes of children learning to read and write are really valuable. We've forgotten what it's like to learn HOW to do this stuff." The impact on the candidates sense of responsibility seemed to be

highlighted as many commented about the complexity of teaching young children how to read and write. Mary Beth stated, "I'm overwhelmed with the immense task of teaching someone how to read and write. I learned how to read so easily, but now I realize everyone didn't have my experience and it has affected how they feel about literacy. I don't want to turn anyone off of reading and writing."

Comments and connections were positive about the relationship between the experience with this project and their understanding of the role of teachers as literacy guides and strategic problem solvers. Candidates in post course interviews designated their own perception of their personal level of problem solving as a teacher of reading and writing using the Problem Solving Taxonomy shown earlier. A clear majority, 72% interviewed, see themselves as Consciously Unknowing. A majority of the statements focused on the notion that they've learned a lot but have a long ways to go and they know it. Another 25% see themselves as between Consciously Unknowing and Consciously Knowing. These candidates feel that they are beginning to problem solve at a simple level in their current field experiences but have not yet developed the confidence to go it alone. A confident 3% stated that they are at the Problem Solving level as they see children's behaviors and have an understanding of how to begin to intervene for them. These levels are self reporting based on personal perceptions, not on performance so are open to criticism. However, they make a positive statement about the candidates' belief in themselves, their belief about their abilities to problem solve, and their sense of self-efficacy. Janine said, "My teachers at my placement talk about assessments, about tools for intervention, and about skills and I can join in the conversations in an understanding way. I feel like a true professional. Just beginning I know, but a true professional."

Educational Importance

Novice teachers' first years in a classroom often place them in the role of sole decision maker in the design and implementation of the classroom physical and instructional environment. Their decisions are expected to result in positive student achievement. Schools rely on the notion that novice teachers are ready to go from the start or at least ready to go with a minimum amount of support and instruction. These new teachers listen to what the "rules" dictate and then they do what most often their experienced colleagues do—they follow what they feel is personally best (Routman, 1996). Their knowledge base is put into immediate use and they rely on their own experiences as a student, the methods and materials of their mentor, or the knowledge and experiences of their teacher training programs (Zmuda, Kuklis, & Kline, 2004). The teacher's explicit understanding of strategic problem solving helps to determine the role each of those influences will play in the classroom instructional decisions (Schlechty, 2001).

The goal then should be to nurture the novice teachers' positive sense of self so their feelings of self-efficacy are strengthened and they can better understand their role as strategic problem solver (Lyon, 2003) so that they "know that they know" and have the self efficacy to explain their beliefs . If candidates understand the impact of strategic thinking on problem solving they have the potential to analyze situations, use deep knowledge to make decisions, and explain their reasoning to others (Gillet, Temple, & Crawford 2004).

The struggle for teachers' right to be strategic problem solvers relies to a great deal on today's pre-service teacher candidates—tomorrow's classroom teachers. It is imperative that these candidates enter the profession understanding their literacy history, how they used problem solving to become readers and writers, and the role their past will play on future literacy instruction. Teachers who believe that learning to read and write "just mysteriously happens" with clever activities will in turn deliver such inadequate programs. The history of practice will prevail. The strategic instruction needed by students who can be problem solvers is lost when new teachers do not understand the complexities of strategic literacy instruction. This study uses the writing process and introduces digital storytelling as a technology tool for pre-service teacher candidate reflection on how they learned to read and write, their vision of themselves as readers and writers, the complexity of the problem solving process, and thus the strategic decisions they will be called upon to make for their students in a best practices literacy program.

Literacy teachers of tomorrow must be strategic problem solvers who not only know but they know that they know. They must have the strong self efficacy to affirm their beliefs and articulate what they know to be best practices in the teaching of literacy. This level of understanding allows teachers to make the critical literacy decisions in the classroom. This researcher believes that reflection on self promotes development of that understanding. Additionally, a strong sense of self as problem solver is needed in order to counterbalance the demands of top down decision makers who are mandating standardized and homogenized literacy instruction. By combining the highly engaging tools of technology with the process of exploration of literacy histories pre-service teacher candidates can build this sense of self and a strong self-efficacy as problem solvers of the future. Writing and technology production to develop self awareness using problem solving and reflective practice is the focus of this paper.

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PAINTED LITERACY: READING ALOUD RITUALS

Sarah L. Dowhower

Retired, Miami University of Ohio

Note to Reader: Because of the paper's considerable length and large number of paintings, I have added navigation tools to quickly reference the image captions, footnotes and the Internet address where each painting can be found. Every figure and footnote has a double link. Just click on the numeral to go to the appropriate information at the end of the paper and click on the numeral there to take you back to the part you were reading. If you want to examine a painting in larger format or learn more about it, the URL in the caption will take you (for the most part) to the original image at a museum or gallery.

Painted Literacy:
Reading Aloud Rituals

Modern reading is a silent, solitary and rapid activity.
Ancient reading was usually oral,
either aloud, in groups,
or individually in a muffled voice.
Saenger, 1997, p. 1

Historically, the *voice* has been at the very core of Western literacy. In our rhetorical culture, text initially was *written to be heard*. Starting with the Greeks, spoken language led both literature composition and publication. Conceivably, more people have *heard* text read than have ever held a tablet, scroll, or book in their hands.

Few books and articles can be found that are devoted to the history of oral reading but hundreds of paintings survive depicting its significance. While scholars have given more attention to the evolution of silent reading in Western culture, artists have documented ubiquitous reading aloud rituals practiced over millenniums. Whereas the important contribution of "voiced text" to the spread of reading and writing has been largely neglected and the historical continuities essentially ignored (Graff, 1991), the pervasiveness of oral reading has been captured visually for centuries in manuscripts; on vases, walls, altarpieces and easels in vibrant colors.

The intent of this paper is to begin to redress this imbalance by presenting painted images as guides for thinking about and understanding literacy practices in general and oral reading specifically *over time*. In bringing to the present the past voices of readers and their interactions with listeners, we have a marvelous canvas on which to study the "historical continuities" of literacy and tell the story of how painters pictured existing oral reading traditions through the centuries.

A Brief Grounding in History and Theory

The art of reading out loud
has a long and itinerant history.
Manguel, 1996, p. 110

Before beginning the story of oral reading in paintings, let me first situate the art of reading out loud within a framework of the history and several theories of literacy. Beginning with antiquity (Saenger, 1997) and until the turn of the 19th century, reading practice, as a Western cultural norm, was "exclusively oral reading" (Allington, 1984, p. 829). In the 20th century reading aloud, although still a presence in public and educational arenas, took a back seat to private silent reading, with the exception of a fruitful 1990s line of research and practice in emergent literacy that focused on *shared book reading* to young children. With the dawn of the 21st century, oral reading has had a renaissance with the expansion of audio and video digital technology. (See Footnote [1].) In literacy education, commencing with the publication of the National Reading Panel

Report in 2000 (NRP, 2000), a plethora of books has focused renewed attention on oral reading in schools under the guise of *reading fluency.* ([See Footnote [2].)

Indeed, in addition to *shared reading* and *reading fluency*, reading text aloud has had many labels throughout history. Among them are *oral interpretation*, *collective reading, communal reading*, *public reading*, *recitation*, *formal rhetoric, readers' theater*, *interpretive reading*, *oralized text*, *voiced text* and *prelection*. Because the term refers to "listening" as well as to the act of transmission of text, the term I like best is *aurality*--the act of reading aloud to an audience of one or more persons, as first applied by Coleman (1996, p. 228) and later defined by Melve (2003) as "the oral promulgation of a written text in front of a public" (p. 153). ([See Footnote [3].)

Aurality's Place in Literacy Theories

One reason oral reading has had so little attention in the West is the elevated status given to the theory and practice of silent reading in the last century. The modern silent reading movement emerged in Europe and America at the end of the 19th century as reading materials proliferated, literacy was on the rise and silent reading as practice gained primacy. With changes in practices, purposes and expectations of literacy and the belief that oral reading had out-lived its usefulness in society and education, scholars since then have turned their substantial energies to the psychology and physiology of the reading process (reading efficiency, assessment and cognitive aspects); and pedagogy (instruction of silent reading comprehension and word recognition). ([See Footnote [4].)

Another reason is that the dominant model of oral/literacy theory up to the 1990s gave short shrift to the practice of aurality. Applying the model developed by Eric Havelock, Jack Goody and Ian Watt, scholar Walter J. Ong, in his influential book *Orality and Literacy* (1982), argued that orality and literacy (i.e., spoken language and silent reading/writing) were mutually exclusive and, indeed, polar opposites. Often referred to as the "Great Divide," Ong's literacy thesis posited that Western culture progressed from one pole to the other, moving from a spoken tradition to a written one. Full literacy occurred with the right social conditions and technology (e.g., writing), transforming how people thought (synthetic to analytic) and created (by the tongue or with pen).

As for reading aloud to others, Ong treated it as a fossil remnant of the oral tradition. Maintaining that the practice was just a carry-over from orality, he argued it had no place in the binary system other than as a cultural residue (or transition stage) of orality on the high road to silent, private reading and writing. As a literate culture matures, oral reading would disappear in favor of quiet, solitary reading/writing once people gained literacy skills and had easy access to a wide range of reading/writing materials. Concerning formal rhetoric, Ong suggested that the extent to which it is used "is an index of the residual primary orality in a given culture" (p. 109).

Several lines of research (addressing how people acquire and use literacy in society) have taken issue with Ong's literacy thesis in support of a more complex interaction between the spoken and written worlds. Theses lines include

(1) *Medieval studies* of orality and listening (Amsler, 2001; Carruthers, 1992; Cherewatuk, 2005; Coleman, 1996; Green, 1994, 2002; Grotans, 2006; McKitterick, 1990);

(2) *Biblical studies* of the oral/aural experiences of sacred writings in religious communities (Graham, 1993; Hearon, 2004; Kawashima, 2004; Marks, 1998; Millard, 2000; Schiffman, 1999); and

(3) *Sociocultural studies* of literary practices, including an alternative literacy thesis by the *New London Group*, a mid-1990s meeting of international scholars who advocated the study of a broad "range of literacies and literate practices (called multiliteracies) in all sectors of life and how these literate practices are similar and different" (Anstèy & Bull, 2006, p. 19). (See Footnote [5].)

The subsequent New Literacy Studies movement based their work on the tenets that "reading and writing only make sense when studied in context of social and cultural (…historical, political and economic) practices of which they are a part" (Gee, 2000, p. 180) and "the conceptions and practices of literacy and orality are inextricably intertwined, historically variable, and fraught with the inequalities and power relations of social life" (Collins & Blot, 2003, p. 36).

Of particular significance to the exploration of images of aurality are Heath's idea of "literacy events" (1983) and Street's concept of "literacy practices" (2001), i.e., specific situations where reading/writing are happening (events) and the linking of these events to broader ways of how people think about reading and writing in social and cultural contexts (practices). Identifying the context and people's conceptualization of a literacy practice, therefore, gives *meaning* to the specific events portrayed (e.g., as in literature, photographs, … or in this case, paintings).

In specifically addressing the *practice* of aural*y*, both D. H. Green and Joyce Coleman have been quite "vocal" about its place in oral/literacy theory as an independent phenomenon. In his research on German literature, Green (1994, 2002) argues that evidence of deep, long-term links between "hearing with reading" exist in the "double formula"; i.e., that many authors of the Middle Ages specifically wrote for both public delivery and private reading in Latin and, particularly, the vernacular. Joyce Coleman (1996, p. 53) contends that the Great Divide is really a "deficiency theory" in that aurality is not a transition stage between public orality and private literacy, but can be a clearly preferred mode of transmission or reception of literature even for French and English middle and upper classes who read and had access to an abundance of texts. She presents convincing proof for this position using both *late medieval writings* as well as *manuscript paintings* depicting specific read aloud events.

Unpacking Aurality
In attempting to understand textual aurality (a) in relationship to the mix of other modalities and; (b) the practice of aurality as portrayed by artists through the centuries, I have adapted Coleman's scheme and terminology (1996, pp. 34-42) in order to unpack

the meaning of *oral transmission and reception of text* (Figure 1). The scheme is meant to be open-ended and freely overlapping (p. 51) as discussed below. ([See Footnote [6].](#))
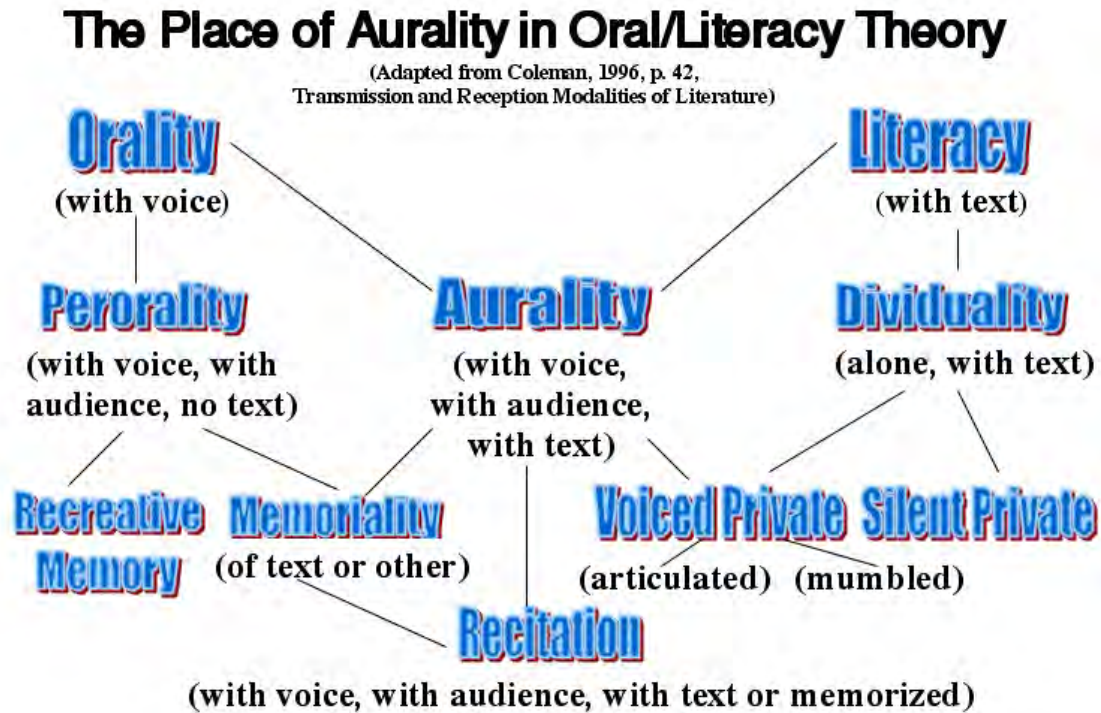
The Place of Aurality in Oral/Literacy Theory

(Adapted from Coleman, 1996, p. 42,
Transmission and Reception Modalities of Literature)

Orality
(with voice)

Literacy
(with text)

Perorality
(with voice, with
audience, no text)

Aurality
(with voice,
with audience,
with text)

Dividuality
(alone, with text)

Recreative Memory   **Memoriality**
(of text or other)

Voiced Private   Silent Private
(articulated)   (mumbled)

Recitation
(with voice, with audience, with text or memorized)

Figure 1

Starting with Ong's extreme poles, *orality* means "having no writing" and *literacy*, "having writing;" and as modalities, "with voice" and "visually with text." Aurality is distinguished from "orality" by its dependency on text for oral reading to others and from "literacy" by its "publicness" and dependency on the voice for transmission. Thus, a*urality* is presented as an independent modality for presenting and receiving written text, on par with the two other domains of *perorality* (orality where written language is spoken publicly without text) and *dividuality* (articulated/mumbled or silent private literacy). A "dividual reader" is one who chooses to read/write privately; aurality overlaps when that individual reads/writes aloud to himself.   What is presented/created by voice (only) may be either generated from textual models (called *recreative memory*)--the dominion of bards; or memorized in rote fashion from text or from the oral language of another person--the province of minstrels. The presenting of memorized text orally (*memoriality*) as a modality of transmission often is the result of aurality (reading aloud over and over) or dividuality (mumbling privately). Overlap, also, is evident in a *recitation,* for instance, because it is either *aurality* (i.e., the informal/formal voiced reading of text to others) or *perorality* (i.e., the presentation of memorized written language--the craft of actors.

Aurality in Paintings: Taxonomy of Read Aloud Rituals

Reading is a practice that is always realized in the specific acts, places and habits.

(As historians,) we must identify the specific distinctive traits
of communities of readers,
reading traditions and ways of reading
Cavallo & Chartier, 1999; p. 2

Remarkably, artists have visually chronicled the use of "voiced text" and its continuous and critical presence in Western culture for over three millennia. To date, my research has identified over 900 paintings (from antiquity to the present) in which aurality is the central message. Despite claims that private silent reading is the ultimate goal of a literate society and aurality (as a transition stage) should/would disappear, these images provide compelling evidence to the contrary. Oral reading has had an enduring and pervasive legacy.

Paintings of persons listening to others read can be found in book paintings and on pottery, frescos, panels and canvases. These images fall into five different motifs, i.e., traditional conventions I refer to as "reading aloud rituals." (See Figure 2.) After an explanation of these rituals, the remaining paper will survey oral reading images in each. (See Footnote [7].)
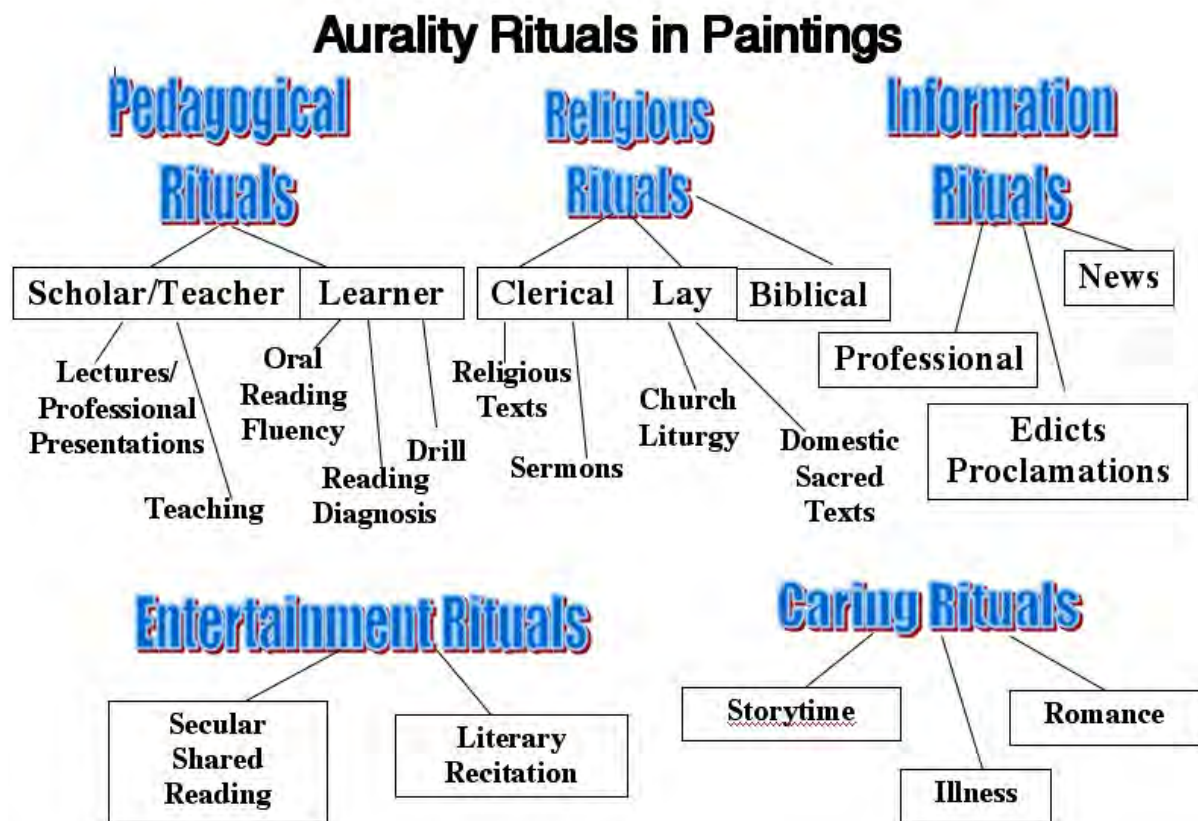

Figure 2

Painted rituals are *Pedagogical* in nature when they portray scholarly pursuits such as lecturing or presenting learned commentaries to older students or academic

audiences with the intent of imparting ideas and knowledge. Paintings of children show teachers reading aloud for purposes of literacy instruction and to expose pupils to literature. Artists picture students drilling letters, practicing connected text aloud to develop fluency; and reading to teachers for purposes of assessment. In *Religious* art, portraits of clerics and lay people depict them reading sacred text orally for both private and public reasons; images of well-known Biblical narratives feature famous religious figures reading aloud. Representations of public aurality such as the oral transmission of written news, professional knowledge (e.g., reading of legal, financial or governmental documents) and public edicts/proclamations are included in *Informational* Rituals. Painters illustrate *Entertainment* traditions in the pure secular literary sense, as the leisurely sharing of literature in intimate settings or the reciting of poetry and prose in public forums. Paintings of C*aring* aurality, also involve entertainment, but add the element of personal nurturing as the ritual of sharing literature plays out with children, during illnesses or in the course of romantic interludes.

Pedagogical Rituals

Oral reading must serve a very real function in instruction
or it would have disappeared long ago.
Hoffman & Segel, 1983, p. 1

The story of oral reading in paintings starts with the inception of the Greek alphabet and the establishment of the phonetic principle. Several historians posit that the beginning of literacy (and the Western literary tradition) was a conscious effort to preserve spoken poems like the *Iliad* and the *Odyssey* in graphic form (Powell, 1991; Robb, 1994) starting around the 7th century BCE. Given that Greeks valued the spoken word so highly, it is logical to conclude that "writing held little interest except as vocalized reading…and reading aloud was the primordial form of reading" (Svenbro, 1999, p. 38).

Greek schooling with the learning of one's letters began in the 5th century BCE; subsequently initiating a way of teaching reading that has lasted in the West till the late 19th century in various interpretations and reformulations (Graff, 1991). Significantly, two methods of reading instruction remained constant through that time, the use of oral reading and the alphabetic approach. (See Footnote [8].) Leaning to read and write were oral events both in *reception* and *transmission*. Teachers read to students; students read to teachers; teachers listened to students; students listened to teachers and teachers and students read together in choral fashion. Oral repetition was common--pupils would reread or listen to their teacher reread with many purposes.

Figure 3

Images on various pottery pieces as early as 500-400 BCE suggest the high value Greeks placed on reading aloud. While some of these ancient portraits are believed to be writers, others are students in school scenes. One pedagogical example is a red-figure Greek cup (Figure 3) that shows a youth with lips slightly apart sitting on a block and reading from a scroll. Although hard to make out, the words he is reading aloud could well be from the *Iliad*. The boy's audience includes another youth holding the lyre (often used to accompany recitations) and an older man with a beard turning as if listening attentively. I believe this and other literacy scenes like it are the earliest extant images of reading aloud.

Figure 4

The next section surveys the two most common types of oral reading pedagogy pictured in paintings: (a) scholars' instruction to older students/adults; and (b) younger pupils' voicing of text in order to learn to read. Unfortunately, from antiquity to early medieval times, only a few visual records (mostly stone carvings and mosaics) exist of these teaching and learning oral reading rituals.

Scholars Reading Orally

After Greek pottery, the first extant *paintings* of instructional scenes began appearing in Western illuminated manuscripts in the 12th century. Since most education was associated with religion during the Middle Ages, it is not surprising that the earliest oral reading paintings of teaching and learning depict scenes of men of the church.

Figure 4 is typical of early 11[th-] to 12th century practice at the great medieval learning centers of Italy (Bologna), England (Oxford) and France (Paris). An esteemed teacher (called a master and later a professor) taught by

reading aloud to a small gathering of students. Hugh of Saint Victor (1096-1141), a great Paris educator, is shown here lecturing to three tonsured Augustinian monks. In late Antiquity and early Middle Ages a monk/teacher would read aloud and others would listen without following in a text. Sometimes artists would show a student following along as in Figure 4. Universities had early regulations of one book for every three students (Martin, 1994).

To honor Hugh's status and the fact that he was head of the Abbey's School of St. Victor, the artist painted him higher and larger than his monastic students. (A raised canopied platform was another convention used by painters to aggrandize the master teacher.) Hugh did much to advance the age of Scholasticism and the theoretical foundations for medieval universities; in fact, Hugh's school became a residential part of the University of Paris (Action Institute, n.d.). He wrote the very first treatise on the act of reading (*Didascalicon),* stressing the fundamental role of reading in the school curriculum; encouraging the use of initial colored capitals and other aids for parsing to assist memorization and finding information on a page; and explicitly describing "three

modes of reading: reading to another, listening to another read, and reading to oneself by gazing (*inspicere*), that is, silent, private reading" (Saenger, 1997, pp. 244-245).

A miniature of a 15th century large group theology lesson (Figure 5), also at the University of Paris, gives a grander version of instruction than Hugh's portrait. Note the larger-than-life scholar reading aloud from a tome as the undersized pupils huddled over their tiny copies. The master is high on a *dais* constructed with a wooden canopy and sits on throne-like furniture called a *cathedra* (official seats of learned persons) to indicate his authority.

Figure 5

By the 14-15th centuries, a professor might read aloud from his personal commentary (or authored book) often distributed before the lecture to encourage the students to read along silently. Visual reading along with the professor's oral reading was thought necessary for comprehension and "to grasp more easily the subtle arguments" (Saenger, 1999, p. 133). Interestingly, none of the students hold pens or are notetaking. Listening and reading aloud both served as memory tools to store text in the mind to be used for future meditation, composition, or disputation (Carruthers, 1992).

Learners Reading Orally

One of the first pedagogy related motifs was the double portrait of King Solomon teaching his son, Rehoboam. The 1240 English-made Latin Bible of Robert de Bello (Figure 6) contains an early example. Shown in a historiated letter P, Rehoboam is reading from an open book to his father. Solomon sits on his throne but is shown anachronistically as a monk with a tonsured hairdo. He holds a switch over his son's head, signifying his disciplinarian position on instruction.

For as Solomon himself wrote:
He who spareth the rod hateth his son: but he that loveth him correcteth him betimes (Proverbs 13:24); and Withhold not correction from a child: for if thou strike him with the rod, he shall not die. Thou shalt beat him with the rod, and deliver his soul from hell (Proverbs 23:13-14).

Figure 6

Pictures of stern male teachers with body-strikers continued to be typical of literacy instruction scenes from 13th century manuscript paintings like Figure 6 through easel paintings of the 17th century. For instance, Dutch artist Gerard Dou (1613-1675) executed several works where children read aloud to grim, unforgiving schoolmasters. Figure 7 (*The Schoolmaster,* 1645) shows a boy intently reading a paper to the teacher while another is pointing to text in a book. Like Solomon, the sour-looking teacher looks ready to punish the child if he makes a mistake!

Figure 7

The feminine model of literacy instruction in paintings contrasted dramatically to the threatening masculine one. Beginning in the late 13th century, double portraits of Saint Anne teaching her daughter Mary to read made an appearance in English manuscripts. These, along with later images of the Virgin teaching Jesus to read and write, show the act of reading instruction as an intimate and loving bond, characterized by physical touching and sharing of a text. Significantly, these works link divine authority with the teaching of reading and are the archetypes for ensuing popular depictions of the maternal motif of literacy instruction through the 20th century.

The oldest surviving manuscript painting of Anne teaching Mary may be from the *Alfonso Psalter* (1284). Like others of that time period, the artist of Figure 8 shows both saints standing. By the 15th century, the pose changes with Anne usually shown seated and Mary standing—both lovingly touching the book. Peter Paul Rubens (1577-1640) captured this posture on canvas in 1625 initiating a popular motif called *The Education of the Virgin* (Figure 9).

Figure 8

Paintings of secular women teaching children to read began in the late 1660s. *The Reading Lesson* (Figure 10) by Gerard Terborch (1617-1681) is one of the first notable examples. The child's intensity is countered by the school mistress' look of boredom
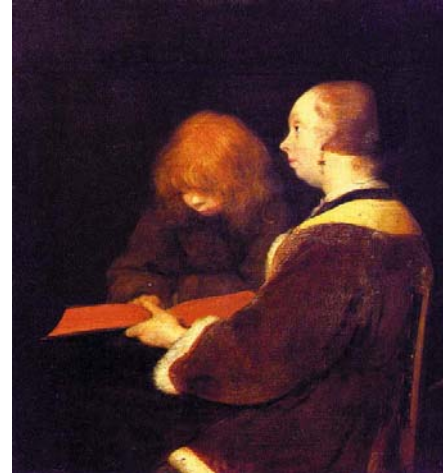
Figure 9

Figure 10

Toward Schooling of the Masses

While the concept of education for everyone was a 19th and 20th phenomena in Western culture, the movement for schooling of the masses actually began in the 1500s, with major strides occurring in England as well as the Netherlands and Germany.

Figure 11

Ambrosius Holbein (1496-1519) painted a scene of a German school on a signboard in 1516, advertising the services of a schoolmaster (Figure 11). The print above the sign says, "anyone can learn to read and write, irrespective of whether he or she is a burgher, an apprentice artisan, a woman, maid, boy or girl. If, despite all the effort they should fail, slow learners would have nothing to pay." (Web Gallery of Art, n.d.a). Notice the contrast of approaches between the schoolmaster with the rod and the seated schoolmistress teaching on the other side of the room.

As seen in Figure 7 and Holbein's work above, students were not taught together, but individually. Emphasis was on memory and fluent rendition of the text rather than comprehension.

> *In his or her turn, each pupil was called to the teacher's desk or chair and asked to recite a memorized lesson, to illustrate a syllabication exercise, or read aloud several verses"* (Maynes, 1985, p. 29).

Beginning in the mid-1600s with Dutch painters and through the 1800s, pictures of large groups within interiors of secular schools became popular. These paintings told stories of the mass education of lower and middle class children (both boys and girls)

reading aloud together in shared small group fashion or individually to a teacher for assessment purposes. Adriaen van Ostade (1610-1685) and student Jan Steen (1626-1679) were the forerunners of these genre scenes. Figure 12 by Ostade shows again the stern male disciplinarian motif.

Figure 12

By the end of the 19th century in Western Europe and America, when a high percentage of children ages 8-14 were enrolled in schools, oral recitation was still the main mode of learning. Three examples show children reading aloud in France (Figure 13: *Village School);*

Figure 13

Switzerland (Figure 14*: School Exam*); and the United States (Figure 15: *The Country School*). Early frontier schools in midwest America as pictured by Winslow Homer (1836-1910) were sometimes called "Blab Schools" because students would read orally to the teacher and practice individual lessons out loud so that the teacher could make sure everyone was working.

Figure 14

Figure 15

In the 20-21st centuries artists turned their attention to social statements encapsulated in oral reading scenes advocating the importance of schooling for every child, as in this contemporary painting by Melvin King (b. 1935) called *Stay in School* (Figure 16). The adolescent girl is reading aloud a question from the blackboard (each query has a black inventor as the answer). Note the messages on the walls!

Indeed, oral reading serves a critical function in classrooms, as Hoffman & Segel (1983) suggest. Today we have a better sense of the rationale. Reading aloud aids memory (Carruthers, 1992), "helps overcome distractions, facilitates comprehension monitoring and increases auditory feedback" (Walczyk & Griffith-Ross, 2007, p. 563). (For other pedagogy paintings through the 20th century, see Dowhower, 2002, Figures 25-31.) Reading aloud also has played a necessary role in religion as described in the next section.

Religious Rituals

Western literacy, of course, has inextricable ties to Judaism and Christianity, as well as Islam. Efforts of these religions to bring people in contact with their sacred texts (i.e., reading or being read to) spurred the growth of the reading public. However, except in our modern period, a large percentage of people were actually illiterate; and so for most, reading scripture meant *hearing it* read by others (Ehrman, 2005). Thus, scholars believe that early religious texts, like the literature of the Greeks*, were written to be heard.* "Writing as calling" is a particularly descriptive phrase used by Marks (1998) to communicate the orality/aurality of scriptures, i.e., the intended "spokenness" of the Bible as well as the communal sense of "calling together." The Hebrew term *miqra* is "the traditional Jewish name for the Bible, meaning, literally, that which is called or recited " (Marks, 1998, p. 19). The Arabic *Qur'an* is comparable in that the term means "recitation" or "to read and recite." The following discussion surveys religious paintings in which saints, clergy and the public convey the communal sense of "calling together".

Biblical Aurality

About the time the Greek school scene (Figure 3) was painted (5th century BCE), Ezra, the prophet and scribe, spurred a shift in religious thinking--from viewing the Old Testament as a "contract to be signed and preserved" to that of Torah as "a text that is actively studied and interpreted" (Marks, 1998, p. 4). Ezra translated the *Torah* into Aramaic and instituted its public reading in the synagogue in about 444 BCE. These readings were the center of synagogue life and liturgy; done on the Sabbath, holidays, market days (Monday and Thursdays), the first day of every month and fast days. This significant read-aloud tradition has had a profound influence, forming the basis of Jewish practices today.

In Figure 17, Ezra is shown reading the *Torah* aloud in a famous 3rd century fresco at Dura Europus (Syria). This and other scenes discovered in the 1930s, are "the earliest surviving examples of Bible illustration" (Diringer, 1967, p. 62). Ezra would have stood on a wooden box or raised platform called a *bimah*. By elevating the place used for reading and

interpreting scripture, the Jewish community further proclaimed the authority of that text in their lives (Meyers, 1999).

By far, the most famous of all religious oral reading events is that of Moses reading the law to an assembly of Israelites. Indeed, some would suggest that the painting of Ezra (Figure 17) is actually Moses reading the Commandments (Diringer, 1967, p. 63). One of the earliest manuscript images of Moses reading aloud can be found

Figure 18

in the 6-7th century *Ashburnham Pentateuch (Bible of Tours)*. This manuscript is remarkable in two ways. As the oldest extant Spanish Bible, the book is the only Western manuscript of narrative intent that provides a bridge between late antiquity and the 9th century Carolingian Biblical manuscripts. The illuminations are the only surviving example of a manuscript to directly serve as a pictorial model for mural painting in the Latin West. These murals are the late 11th century frescoes at the Abbey of St. Julien at Tours (Verkerk, 2004).

In Figure 18, Moses is reading aloud the law from a diptych (2 panels often hinged together) behind an altar holding a chalice, two vessels and five loaves. Moses' mouth is slightly open indicating he is speaking. On the left, stand 16 men and seven women in two distinct gender groups, gathered to hear the words of the covenant. Around the altar are seven men in white tunics holding other loaves. As Verkerk (2004, pp. 90-91) suggests, this is a curious mixture of both Old and New Testament pictorial elements with the Christian Eucharist substituting for the animal sacrifice and the contemporary church deacons instead of the Israelites on the right. Note the literacy in the clouds where biblical text describes the scene—this type of inscription is called *tituli* (Latin for title or label).

In an illustration from the 9th century *Moutier-Grandval Bible* produced at Tours (Figure 19), Moses also holds a diptych from which he reads. His open mouth and extended index finger are artistic conventions to

indicate the act of reading aloud or speaking. Chances are that the earlier *Ashburnham Pentateuch* influenced the *Moutier-Grandval Bible's* production, since both were kept at Tours.

Clerical Aurality

Book paintings in Western Jewish illuminated manuscripts were rare until the 13th–14th centuries. During medieval times it was the duty of the Hazzan (or cantor) to recite prayers and to read the Torah at services. Figure 20 is from a mid-14th century manuscript in which a Hazzan in a Spanish synagogue is reading the Haggadah aloud to the people below. The listeners are standing according to rabbinical traditions, perhaps influenced by *Nehemiah 8:5*. Pointed arches and spiral columns of the Gothic period support the raised square wooden pulpit (*bimah*) in the middle of the synagogue where the lector stands.

Figure 20

One of the unique early oral reading rituals of the Western Catholic church is the practice of priests reading aloud from scriptures during communal meals. Saint Benedict (480-547 CE), the founder of Western monasticism, composed a series of rules for his friars around 529 CE. Article 38 laid out the procedure for reading at mealtime, making the act of "being read to" an essential part of daily monastic life. Beginning his duties on Sunday, the lector read a prescribed text for the whole week. As to the expectations of the other monks, St. Benedict said, "there shall be the greatest silence at the table, so that no whispering or any voice save the reader's may be heard." (See Manguel, 1996, pp. 114-115.)

Figure 21 is a fresco detail by Sodoma (1477-1549) at a Benedictine abbey near Siena and part of a famous series of 35 panels in the cloister depicting events in the life of St. Benedict as told by St. Gregory. One segment depicts the bearded Saint Benedict seated at the end of the table with his young monks listening as the designated reader stands with his book in a lectern high above on the right wall. Five hundred years later, the approximately 45 monks at the

abbey still follow the practice of reading aloud the Bible and the Rule at mealtimes. Sodoma's painting suggests that all is not what it seems and that several figures are not so spiritually moved by the readings. One monk steals bread from another and the cat and dog fight over the fish on the floor!

Not so with a famous female saint in a medieval nunnery where oral reading during meals was also instituted. A Getty manuscript illustration (Figure 22) shows Saint Hedwig so enthralled with the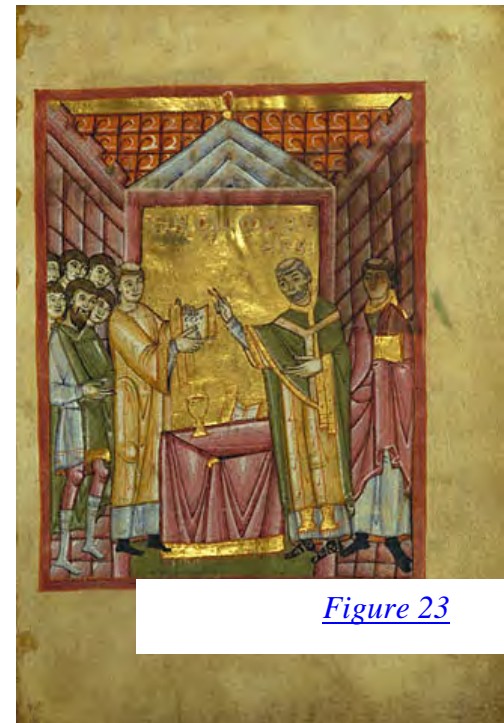 uplifting message, she forgets to eat! Notice the moveable and extra high lectern on which the reader holds her place open to the text she is reading. "Hearing texts read aloud, it was believed, would raise the minds of the listeners to thoughts more spiritual than the needs of the flesh that were being met by food" (Getty Museum, n.d. a).

Figure 22

Up until about 1000 CE, manuscript and fresco artists depicted scenes based on biblical narratives and imaginary portraits of deceased saints. Pictures of actual clerics and their lay contemporaries began appearing in the 11th century. One of the earliest illuminations of real people involved in oral reading is this Ottoman example showing a Bishop named Engilmar of Passau (875-899) holding mass for Bavarian commoners (Figure 23). The all-male congregation has full heads of hair as compared to the three tonsured monks leading the service. This image was the original first page of a benedictional containing blessings to be recited by a bishop at mass. One deacon has a closed book while another holds an open benedictional from which the Bishop reads orally. Engilmar's hand and finger position suggest that he is bestowing a blessing from the book. (Getty Museum, n.d. b).

By the turn of the 15th century, images of Western Catholic liturgical rituals became more common, particularly in illuminations of French devotional books. Several types of masses were popular motifs, including burials and important celebrations. As had been done for centuries, these masses were read aloud only in Latin.

Figure 23

Funeral and burial services called "Office of the Dead" were read to benefit the souls of the deceased. Figure 24 is from the famous *Rohan Book of Hours* (containing psalms and prayers for lay people). In the illumination, a monk assisted by an acolyte says the benediction and tonsured monks chant the Mass, as four gravediggers lower two corpses covered in their shrouds into the bone-strewn cemetery outside the church. ([See Footnote ⁹].)

High mass, in this case Christmas Mass, is depicted in a renown early 14th century book of hours made for the Duke of Berry entitled *Les Tres Riches Heures* and sometimes referred to as the "king of illuminated manuscripts." The illumination (Figure 25) is an exquisite rendering of the interior of a Gothic church of the period with its vaulted ceilings and stained-glass windows *and* a scene filled with literacy. The faithful congregation is on the far right, two aristocratic women are following the service in their books in the foreground, the choir is gathered around one lectern

Figure 24

to recite or chant the office, and the deacon is reading aloud from the Latin Gospel at the altar.

As the Limbourg brothers (active ca. 1400) were executing the *Les Tres Riches Heures* in France, there was a movement afoot in England to allow the common people to hear the Scriptures in their own language for the first time. In the early 1380s, a priest and professor from Oxford, John Wycliffe (1324-1384) completed the first hand-written English language *Bible*—accurately translating the *New Testament* into Old English from Jerome's Latin *Vulgate*. Many of these hand-written manuscripts still exist today. Figure 26 is a 19th century painting by Ford Madox Brown (1821-1893) showing Wycliffe reading his translation to followers including John of Gaunt, The Duke of Lancaster, a strong supporter and protector.

Figure 25

Figure 26

Wycliffe spawned a late medieval reform movement (ca. 1382-1430) called Lollardy that, among other things, emphasized the reading of the Bible in the vernacular by the laity. Lollards established a tradition of Biblical study and collective readings across England, as "a plethora of wandering preachers" read the scriptures in English to people far and wide (Graff, 1991, p. 103).

Wycliffe's reform was often thought of as the main precursor to the Reformation. Like Wycliffe, Martin Luther (1483-1546) translated the *New Testament* for the common man. In contrast, Luther translated it into German from the original Greek and Hebrew and had it *printed* in 1522 (Schaff, 1910). While silent reading was certainly practiced in this era, reading aloud in small groups and the collective reading of the Bible and other spiritual texts followed by discussion, were an important part of the Protestant Reformation movement across Europe (Gilmont, 1999) and later America. Thus, oral reading played a critical role in the first great mass-literacy effort of the West (See Resnick & Resnick, 1977). Figure 27 is a magnificent altar painting of Luther by Lucas Cranach the Elder (1472-1553) in Wittenberg, Germany. As Luther extends his hand, he could well be reading from the *New Testament* translation he believed should be available to all. Luther has his congregation's complete attention as they hang on his every word.

Figure 28

In contrast, there is no doubt that aurality of clergy also had its negative effects. In 1728, the brilliant satirist of moral follies, William Hogarth (1697-1764) painted a Protestant church with the preacher high in his pulpit, droning on to a packed, but snoring congregation (Figure 28). Even the lector is asleep in this image of oral reading gone bad!

From Clergy to Commoner

During the Reformation and through the end of the 19th century, reading the Bible was a significant aural tradition in both European and American homes. Reading within the family circle was a common way not only to learn literacy, but also to share the "Word" in a social setting. Genre artists of the 1800s duly captured this phenomenon in multiple paintings—laity in many different countries reading and hearing inspirational texts in their mother tongue.

Being read to occurred in large solemn family gatherings as in this Scottish scene (Figure 29: *Reading the Bible* by Thomas Faed);

Figure 29

in small groups with parent and children as in this French portrayal (Figure 30: *Reading the Bible* by Hugues Merle); and with husband and wife as in this American rendition by Eastman Johnson (Figure 31) entitled *The Word is a Lamp unto my Feet and a Light unto my Path.*

Figure 30

Figure 31

Information Rituals

Images of written information communicated aurally began appearing in manuscripts of the 1200s. The ancient practice of using messengers to deliver dispatches and news to the aristocracy was the theme of these miniatures. A shown in this next section, by the 1600s, paintings of the general public began to depict various practices of expanded mass communication; as well as historic and far-reaching edicts issued by rulers and governments and transmission of important information by lawyers, accountants and other public service professionals.

Figure 32

News to One and All

News traveled at first by personal letters and dispatches and then, with the advent of printing, by newsletters called broadsheets. The earliest genre scenes depicting the verbal transmission of printed information came from the Netherlands where news sheets or single-issue "newsbooks" (the ancestor of the modern newspaper) began to flourish during the mid-1600s (Apgar, Higgins & Striegel, 1996).

In Figure 32 (*Messenger Reading to a Group in a Tavern* by Ludolf de Jongh), a courier is reading the news to an intent audience of three in an alehouse. He can be identified as a trumpeter (one who announces important news) by the post horn slung over his shoulder. The document the messenger is reading with such import could be "a letter, a dispatch or a news sheet;" scholars are not sure which (Apgar, et al., 1996, p. 5).

Aurality was still the reading mode of choice 200 years later as numerous artists in the 1800s painted genre scenes of audiences listening to news read from various printed periodicals and personal letters. Figures 33 and 34 are good examples of these two forms of communication.

Figure 33

Figure 34

Click here to view painting.

Both scenes are celebrating good news with three generations of family. In the first (Figure 33: *Reading from the Bulletin of the Grand Army* by Louis-Leopold Boilly), an upper class family is gathered around a map and listening to the report of the defeat of Napoleon. The second painting entitled *Good News Abroad* by George Smith (1629-1901) (Figure 34) shows a woman sharing a letter from across the sea with her family in a rural peasant setting.

A year after George Smith painted this scene, a most interesting read-aloud movement occurred in Cuba—a type of early CNN! In 1865 a cigar-maker and poet,

Saturnino Martinez, published a newspaper for the workers containing current events, literature, poems and short stories. Because illiteracy was so high (85 %), he made the newspaper accessible through a public reader (lector) starting in January of 1866. The same such read-aloud rituals began in United States cigar factories in the early 1900s. One account says that American cigar-rollers heard news read (and often translated from other papers) in the morning and a book in the afternoon (Manguel, 1996).

Figure 35

While there appear to be no early paintings of this phenomenon, hand-colored photographs exist such as Figure 35 taken in Havana in 1907. Reading the newspaper to the busy cigar-rollers below, the lector sits high in a chair on a platform.

A contemporary artist, doctor and novelist, Ferdie Pacheco (b. 1927) has captured the idea of *el lector* in various contemporary paintings; Figure 36, entitled

Cigar Lector with Glasses, is one of his many renderings of this theme.

Figure 36

Edicts and Proclamations

Edicts were another form of aural communication issued by religious figures, rulers or government officials and a favorite subject of painters. Figures 37 and 38 are two well-known examples.

Figure 37

The 1521 event portrayed in Figure 37 by Hendrick Leys (1815-1869) is the reading of the infamous public *Edict of Charles V*. Four years after Luther posted his 95 theses, Charles issued severe consequences to those following Lutheran teachings.

> *Anywhere from 50,000 to 100,000 Netherlanders were burned, strangled, beheaded or buried alive in obedience to the edicts of Charles V for such offenses as reading the Scriptures, refusing to worship graven images, or ridiculing the idea of the actual presence of Christ's body in the wafer.* (John L. Motley in *The Rise of the Dutch Republic,* 1864, as cited in Boettner, 1932).

The concerned looks on people's faces as they listen seem well founded!

The juxtaposition of Charles's Edict (Figure 37) and Lincoln's Emancipation Proclamation (Figure 38) is striking—persecution vs. freedom.   The artist Francis Carpenter (1830-1900) felt that Lincoln's edict was "an act unparalleled for moral grandeur in the history of mankind" and wanted to capture the initial draft being read to the cabinet in *First Reading of the Emancipation Proclamation of President Lincoln.*

Figure 38

It took Carpenter six months to create his 15-foot-wide canvas. In an 1866 letter to the artist, Secretary of Treasury Chase remarked on the composition of the work, noting that he and Stanton appear symbolically on Lincoln's right in the painting, having "thoroughly endorsed and heartily welcomed the measure," while those cabinet members who had at first "doubted, or advised delay, or even opposed" the proclamation appear on Lincoln's left. (U S Senate, n.d.)

Figure 39

Professional Public Reading

The next four paintings are in different time periods and give a sense of how pervasive the role of the voiced text was/is in the professions of finance, law and government. These secular scenes have some humor and irony to them, quite applicable in today's world even though they were created long ago and hundreds of years apart.

The 12th century brought a renewal of Western moral thought marked by a plethora of texts on the topic. For instance, over 6500 manuscripts were written between 1100-1500 CE on vices and virtues (Bloomfield, 1979). *Treatise on the Seven Vices* at the British Library was written in 1390 by a Genoa author from the Cocharelli family. In the illuminated manuscript, an Italian monk named (probably Cibo) painted an intriguing medieval banking event (Figure 39*: Counting house scene).*

Interpretations of what is going on in this miniature detail are varied. The British Library Online (see reference for Figure 39) suggests this is an accounting house where

men are paying wages. Other sources say these are Genoese bankers developing interest-bearing deposit accounts. Still others suggest that Cibo was making a statement on the vices of usury and money—with the message that it is a sin to charge interest and those who do are bound for hell. At any rate, the agent at the bottom is marking his place with his index finger as he reads aloud--possibly names of people who are to receive money—and the secretary is recording the transaction.

Three hundred years later, Pieter Brueghel, II (1564-1638) pictured a local attorney reading a legal paper to clients in 1621 (Figure 40: The *Village Lawyer*). Satire reeks from this genre scene with the poor peasants lined up with payment for the lawyer's questionable services. Literacy artifacts abound as briefs and other legal papers are littered about the floor, window, walls and tables.

Figure 40

Another favorite subject of parody in genre paintings of the 19th century was the reading of wills. In Sir David Wilkie's 1820 version (Figure 41), no one is too sad to see the old guy go except maybe the child on the left. As the attorney reads the last will and testament aloud, the young widow in the background is being propositioned and the rest of the family is gathered like impatient greedy vultures.

Some years later, T. Dart Walker (1869-1914) depicted American political life by painting a busy opening session in the US Senate at the turn of the 20th century (Figure 42). In this 1899 painting (*Spending Uncle Sam's Money),* a senator reads aloud a long list of bills to be introduced in the opening session.   The abundance of scattered documents is a contemporary take on Brueghel's satirical painting of lawyers in Figure 40.   Lampooning the enormous amount of "customary miscellaneous bills" to be considered, the picture suggests that not much has changed in contemporary times.

Entertainment Rituals

The very roots of Western orality and aurality are the entertainment rituals of antiquity. Greco-Roman literature abounds with descriptions of oral reading and the importance of "the reciter, singer and merchant of words" (See Bahn & Bahn, 1970, pp. 5-45). This section surveys paintings of two types of reading enjoyment: formal literary recitations, beginning with the Greeks and Romans and informal gatherings where literature was shared.

Literary Recitation

As Greeks became familiar with the stories of their Gods and ancestors and Homer's *Iliad* and *Odyssey* became popular, an itinerate reciter emerged called a *rhapsode* (a man who stitches together songs) who provided entertainment for the elite and general public. Instead of the lyre that the minstrels used to accompany their recitation, rhapsodes performed the age-old legends with a staff usually made of laurel or myrtle. The earliest reference to rhapsodes is in the 6th century BCE (Bahn & Bahn, 1970; Neils, 1992). Figure 43 is a ca. 520 BCE attic vase depicting a representative of this illustrious group of "merchants of words."

Between two listeners, the bearded performer stands on a low podium, the forerunner of the Jewish bimah (see Figures 20). He holds a staff called a *rhabdos* and recites (without text, but true to text) Homeric 8th century BCE stories or other epic poems. The man with a forked stick on the left may well be a judge (Neils, 1992). Rhapsodes dressed in extravagant robes, and were extremely entertaining and dramatic, particularly using their staff for emphasis. The profession was competitive in that rhapsodes traveled throughout Greece, vying for prizes at various public festivals. Gonzales (2004) would argue that by 5th-4th century BCE, rhapsodes increasingly relied on and practiced from previously written texts to maximize their chances of winning the contests. Indeed, the Latin verb *recitare* implies not presenting from rote memory, but an act of using both eye and voice in reading aloud to an audience.

"No other texts in the Western imagination occupy as central a position in the self-definition of Western culture as the two epic poems of Homer, the *Iliad* and the *Odyssey*" (Hooker, 1996). In fact several scholars postulate the fascinating theory that the Greek alphabet (the first alphabet with both vowels and consonants) might have been created just to write down the poems of Homer (Powell, 1991; Robb, 1994). In 1885, Sir Lawrence Alma-Tadema (1836-1912), an artist with a passion for the Greco-Roman period, painted a rendition of what it might have been like to have a Homer-like "reciter" animatedly perform one of the seminal poems by the sea (Figure 44: *A Reading from Homer* with detail).

Figure 44 with detail

Bahn & Bahn (1970)   suggests   that   over   the

succeeding centuries as society became less transient and more farm oriented, individual Greek poets (following Homer) gained notoriety. The writers themselves began to take the place of rhapsodes, reading their own poetry to eager audiences. Menander (342? –291 BCE) was one such early Greek poet with a gift for comedy.

Figure 45 is a Pompeii fresco showing him in a sitting position holding a scroll from which he recites his work. Menander wrote over 100 Greek plays between the 4th and 3rd centuries BCE. As pictured, Menander could well be launching a new comedy, for in antiquity, the voice followed the entire act of authorship—from composing aloud to oral publishing through public recitations.

On another wall in Pompeii, a painting depicts an unknown poet with a leafy crown (Figure 46) reading aloud-- probably erotic poetry. Clarke (2003) suggests that this outrageous fresco in the Suburban Baths was to make customers laugh in order to ward off the evil eye of envious bathers. Unfortunately because the poet has a hydrocele and his scrotum is down to his knees, the poor author probably is not able to engage in much other activity!

Figure 45

By the time of Cicero in Italy (106-43 BCE), the reading aloud of one's creations was commonplace in Roman private homes and became increasingly popular in public venues. After the death of Cicero, authors reading their works and professional reciters of others' works were at their pinnacle with poets like Virgil, Horace and Ovid leading public recitals on a grand scale (Bahn & Bahn, 1970).

Figure 46

Virgil and Horace owed much to the patronage of the Emperor of Rome, Augustus (63 BCE-14 CE), "himself an assiduous student of recitation, practicing daily under the tutelage of a teacher" (Bahn & Bahn, 1970, p. 41). Virgil reading in the court of Augustus was a popular motif, particularly in the late 1700s. Numerous painters have pictured Virgil reading his *Aeneid* as the emperor's sister Octavia faints with grief upon hearing about the death of her son Marcellus. In life-size proportions on a large canvas (Figure 47), the French artist Taillasson (1745-1809) shows Virgil looking at his scroll, gesturing as he reads aloud. Beside the Emperor (garbed in red), is the swooning Octavia helped by an attendant. The public reading is made more apparent with the audience of five listeners behind Virgil.

Figure 47

Medieval recitation followed the path of the ancients in the tradition of oral presentation of written works by authors. Spanish King Alfonso X is a good example. Ruler of Castille and Leon, Alfonso, the Wise (1221-1284) was a scholar, writer, composer and significant leader. He is known for his emphasis on writing in the vernacular (i.e., abandoning Latin) and for his text of sacred songs in honor of St. Mary called the *Cantigas de Santa Maria*. Figure 48 is an illumination from a 1275 *Cantigas* manuscript depicting Alfonso reading his poems from a large scroll to a group of adoring people gathered around his throne.

Court readings by authors or their designated readers were still popular 200 years later. In fact,

Figure 48

these performances may have been "the capping event of the (whole) process" of publishing a manuscript (Coleman, 1996, p. 120), i.e., commissioning the translation, presenting the finished edition to the benefactor (dedication) and then the official first reading of the manuscript in a formal public setting. A wonderful example of this crowning event is the frontispiece of Volume II of *The Chronicles of Hainaut* (Figure 49), as translated by Jean Wauquelin (ca. 1428-1452) for Philip the Good. Along

Figure 49

with his son Charles (who became Charles the Bold) and various important court officials, Phillip is listening to the translation from Latin into French of the history of the region that legitimatized his rule of the area.

Starting in the 15th century, the Dutch formed lively secular societies or guilds of poets and dramatists called *rhetoricians*. By the 17th century they gained a wild reputation, often described as "liking their liquor,… literary dimwits, bickerers and incorrigible revelers" (Web Gallery of Art, n.d. b). In the painting *Rhetoricians at a Window* (Figure 50) by Jan Steen (1626-1679), a bespectacled author is reading aloud to his happy drunk companions. The diamond-shaped coat of arms hanging from the sill is the emblem of the rhetoric guild.

Figure 50

The 18th century brought a rise of talented (and sober) professional readers and reciters. Although they are no longer household names to us now, theatrical celebrities like David Garrick, James Quinn, John Philip Kemble and Mrs. Siddons were famous for their readings. Sarah Siddons (1755-1831) was the daughter of John Kemble and one of the great dramatic actresses of the time. In this 1804 portrait in the Tate Gallery (Figure 51) by Sir Thomas Lawrence (1769-1830), she is shown doing a recitation of Shakespeare before the King and Queen—one of her great roles was Lady Macbeth.

Figure 51

This section closes with two famous examples of author prelectors who lived in the 1900s—their names *are* household words. The first man is Hans Christian Andersen (1805-1875).

Hans Christian Andersen (Figure 52 by Daniel Watkins) was a unique bridge between the two worlds of orality and literacy. His humble roots exposed him to the numerous oral traditions in the small community of Odense, Denmark. As he was growing up there, he heard scores of old folk-stories, superstitions and customs, which he later recreated and used as the inspiration for his own creative tales. Andersen was a prolific traveler as well as public and private oral reader, giving over 50 documented

Figure 52

performances of his work. From 1847 to 1870, he shared his work often at private family gatherings, entertained the King of Denmark and court, and gave public readings to various working class audiences—sometimes 500 to 1000 enthusiastic people at one time (de Mylius, 2006).

Of his very first public reading (1858) and the benefits it had, Anderson wrote:

Through the lives of all people there is also a thread, an invisible thread that shows we belong to God. To find this thread in that which is small as well as great, in our own lives, in everything around us, that is what the art of writing must help us achieve…. In this way, the art of writing is equal to science in that it opens our eyes to beauty, truth and the good (as cited in de Mylius, October or November, 1998).

There are several photographs of Andersen reading aloud, but very few paintings. Figure 53 (*Hans Christian Andersen Reads the Story "The Angel" to the Children of the Artist)* by Elisabet Jerichau-Baumann (1819-1881) is an intimate picture of the author reading to the artist's children, with Louise in her sickbed and her three siblings attentively listening. (See Footnote [10].)

Figure 54

Perhaps the best-known author to give public recitations is Charles Dickens, shown in Figure 54 with part of the first chapter of *A Tale of Two Cities* on the desk. Like H. C. Andersen, Dickens (1812-1870) came from a poverty stricken background and aspired to be an actor. Similarly, he began giving public readings to charities in the early 1850s and continued to read to varying levels of social strata through the next two decades of his life. As HCA, Dickens appeared in performances as

a gifted author, actor and reader all rolled into one. Dickens had several photographs (like Figure 55) taken of him reading his books, but no extant paintings.

Dickens gave 472 public readings in Great Britain and America. He was a proverbial one-man show, usually standing behind a desk or lectern with a book and a paper knife. His genius was that he could transform himself in the characters of his books as he read.   An eyewitness to a performance, Charles Kent said,

…character after character appeared before us living and breathing, in the flesh, as we looked and listened. It mattered nothing, just simply nothing, that the great author was there all the while before his audience in his own identity. …Watching him, hearkening to him, while he stood there before his audience, on the raised platform, in the glare of the gas-burners shining down upon him…his (Dickens's) individuality, so to express it, altogether disappeared and we saw before us instead, just as the case might happen to be, Mr. Pickwick, or Mrs. Gamp, or Dr. Marigold, or little Paul Dombey, or Mr. Squeers, or Sam Weller, or Mr. Peggotty, or some other of those immortal personages (as cited in Ferguson, 2001, p. 735).

Figure 55

Ironically, in 1870, before he died, Dickens ended his last performance with the phrase, "From these garish lights I vanish now forevermore" (Fitzsimons, 1970).

Shared Reading

In contrast to formal recitations where authors and actors read aloud, shared secular readings are those where people gather together in informal settings to leisurely hear literature read by their acquaintances or relatives. The first paintings of this type of collective reading began to appear in the 1700s. Two motifs were popular through the 19th century; small intimate mixed-gender groups listening to a reader and beautiful, often grandly dressed women sharing a good read.

Jean-François de Troy (1679-1752) was a French Rococo painter who specialized in scenes of the French upper class and aristocracy. In Figure 56 (*Reading from Molière*), he painted a lively portraiture of elegant social life where entertainment for the elite was listening to plays of the author. There is some irony in the scene since Molière was a satirist who loved to poke fun at the aristocracy in his many comedies.

Figure 56

Also with literary connections, Sir David Wilkie's (1785-1841) poignant counterpoint to Figure 56 is a humble cottar's home as the peasant farmer of the Scottish highlands (called a *cottar*) reads aloud piously to his somber family (Figure 57: *The Cottar's Saturday Night*). The rendering was based on one of Robert Burns' most famous poems (1785) with the same title. Germane to this discussion, Burns' followers today believe that this poem was meant be read aloud to do it justice. The work in Scottish dialect (see Complete Works, n.d.) tells of a gathering of the family's young and old after a weary week of toil for a meal and the reading of "the sacred page" by the "priest-like father" who reverently removes his hat. The family listens to the stories of the Bible and then "homeward all take off their sev'ral way."

Figure 57

Wilkie's masterpiece (Figure 57) is an example of the overlap of both religious rituals and entertainment traditions, as reading the Bible functioned as both in that time and place. The tome glows by the lamp light indicating its prominence; as does the babe and mother, reminiscent of Virgin portraits,

One of the most popular oral reading entertainment rituals (with several hundred existing works) is that of women listening to one another read. The well-known *Reading the Story of Oenone* (Figure 58) by Francis Davis Millet (1846-1912) is executed in the

classical vein. One woman with a crown of flowers in her hair reads the Greek tragedy from a scroll to an absorbed audience of three—all dressed in high-wasted Roman garb. The romantic story was about Oenone who was rejected by Paris for Helen of Troy. Oenone was mother of his two sons and daughter of the river god. When Paris asks Oenone to heal him, she refuses and then kills herself in remorse after he dies.

Figure 58

However, the most frequently painted entertainment ritual is the double reading aloud scene with *two* women and one book. Sometimes the figures are sitting apart and one is listening or meditating as the other reads. In other dual portraits, the women are sitting with bodies touching, hands gently holding a book as in Figure 59. This scene of Hermia and Helena from *Shakespeare's Midsummer Nights Dream* by Washington Allston (1779-1843) aptly captures the aura of shared secrets and shared aurality. As Elizabeth Broun, Smithsonian curator suggests, the painting is a "celebration of intimate friendship derived from the German poet Goethe"; a "friendship so close that they (Hermia and Helena) shared all the same tastes and predilections…." (Broun, n.d., Part. 1).

Figure 59

Caring Rituals

As the image of Hermia and Helena suggests, being read to is often a caring ritual, one in which oral reading is done in a loving, compassionate way. While these rituals can obviously be entertainment, the elements of nurturing and deep commitment go beyond the typical intent of literary amusement. The

final section surveys three strong themes in paintings: the sharing of reading material (a) with children; (b) in times of illness; and (c) during loving or romantic interludes.

Storytime

　　　　The later 19ᵗʰ century was a high point in works depicting family storytimes. These images showed adults affectionately sharing literature with children. An artist famous for her wonderful paintings of children and families at that time was Mary Cassatt (1844-1926). In Figure 60 (*Mrs. Cassatt Reading to her Grandchildren),* Mary shows her mother reading aloud to the artist's nieces and nephews. The three children are listening intently, one with adoring eyes lifted to Grandmother.

Figure 60

Figure 61

Illness

　　　　Sick bed scenes told other stories of caring. The painting of Hans Christian Anderson reading in Figure 53 is one example. Another is a picture (Figure 61: *Convalescence*) by the Italian artist Luigi Nono (1850-1918). He illustrates the age-old scene of parental concern for children's welfare. Wrapped in a shawl, a very pale-faced and red-nosed child is looking at the page of a book her mother is sharing with her. The mother, of course, hopes that a story will make her daughter feel better or at least get her mind off her ills.

Romance

　　　　Like reading aloud to the sick, reading to one's beloved is an act of intimacy and caring. *Reading the Legend* (Figure 62) by Lilly Martin Spencer (1822-1902) shows a man, possibly a husband or suitor, sharing a story with a very attentive partner. As opposed to animals fighting in other paintings (Figures 21 and 33), the dog seems to be enjoying the story, too!

Figure 62

Renoir (1841-1919) painted a scene where the woman is the active reader. Figure 63 (*Couple Reading)* pictures the artist's younger brother Edmond and Marguerite Legrand cozily sharing a good book.

Figure 64 (*Fondly Do We Remember)*, a detail from the painting called *Four Ages of Love* by Norman Rockwell (1894-1978), gives us a glimpse of the autumn years when couples (with their loving dog) look back over their life together. The husband takes a break from reading his book to listen to love letters of long ago--indeed, what we might call "read aloud remembering."

Figure 63

Figure 64

For additional examples of caring rituals through the 20th century, see Dowhower (2002) Figures 32-36. Ironically, contemporary works like Figure 64 (and more significantly, images of reading/writing in general) are hard to find. Obviously, one explanation is the preeminence of individual, private, silent reading of text (via paper and screen); but there are other possible reasons as well.

1. Literacy instruction Beginning in the 1950s and 1960s, the art community largely rejected figurative, realistic and narrative paintings of actual people doing real things--depictions of daily life events were considered irrelevant and worthless sentiment. In fact, Fred Ross of Art Renewal Center suggests that this rejection of storytelling/traditional realism in paintings actually began in the early 20th century (See Ross, 2006.);

2. Advances in technology like photography, film, and computers "have freed artists from having to stick to straightforward representations" so art (i.e., painting) has become more about technique and pushing the boundaries (Belton, 2002, p. 8-9) than about what it has to say about life and the human condition); and

3. Ironically, mass literacy and the pervasive images in mass media seem to have led to diminished interest and cachet in figurative representations of reading and writing as well as the inclusion of literacy artifacts in fine art.

Conclusions

Art of our own time…
often reaffirms our contemporary values and expectations.
Being familiar with the art of other times and places is a useful portal
into others' aesthetics, ideologies, moral, philosophies, politics and social customs
Robert Belton, 2002, p. 8

Painted images act as a visual narrative giving us a window to literacy practices generally and aurality specifically. The works are laden with the contemporary values and expectations of their historical periods and also, importantly, are mediated by the biases of the artists who conceived them in that particular time and place.

So what does this initial foray into the traces of aurality in paintings tell us? While certainly not definitive (See Footnote [11]), the images give a sense that if all literacy is social as scholars argue (Collins & Blot, 2003; Barton, et al., 2000; Gee, 1996), then aurality is the quintessential social literacy practice—the glue that binds together societies, their peoples and communities.

Furthermore, the story of aurality is as much about the people in front of the text (listeners) as those behind the text (reader/author)--the threatening teacher, attentive/non-attentive students, sleeping congregation, greedy family, swooning mother, eager theater audience, petrified town folk, incorrigible reveler, caring mother and loving partner.

Reading aloud as a practice, cuts across place, gender, religion, generation, education, economic, profession and status boundaries. One is struck with the complexity of describing the multiplicity of characteristics (people, places and process) of oral reading in these images--from elite to ordinary, literate to illiterate, old to young, urban to rural; monasteries to taverns, active to passive, individual to collective, religious to secular, voluntary to compulsory …and so on. Also in this complex mix are the various body postures and artifacts in the paintings that privileged aurality. Among the conventions that artists used were finger/hand positions, larger body size, extra height,

gigantic books, and furniture such as the ornate lectern, bimah, and podium, as well as dais and cathedra.

Thus, a myriad of themes surface in the paintings ([See Footnote [12]](#)):

Pedagogical Rituals: Aurality as instruction, assessment, learning, knowledge, threat, memory tool, authority of texts, power of authors and teachers;

Religious Rituals: Aurality as spiritual guidance, salvation, meditation, disputation, spiritual mandate, scriptural authority;

Information Rituals: Aurality as connection with the world, mass communication, social comment, decree, authority, intimidation;

Entertainment Rituals: Aurality as performance, leisure, enjoyment, amusement; and

Caring Rituals: Aurality as affection, devotion, sharing, nurturing, companionship and romance.

Finally, aurality has not been *erased* by literacy's increasing impact on Western culture and communication modes as Ong (1982) suggested it would be. Instead, reading aloud as a preferred modality, has continually changed over time, ebbed and flowed through numerous permutations, distinct time periods, varying communities, differing and often disparate social purposes in a long term symbiosis of the "heard and the read."

Final Personal Comment

Putting this in a contemporary time frame, while driving home from church last week, I began to mentally list all the oral reading events I had experienced in the course of the previous 48 hours and was struck by the 21st century version of each read aloud ritual.

I (a) listened to my husband read an email to his 93 year-old-mother from her sister; (b) read an article in the *Wall Street Journal* (Nassauer & Anderson, 2006) about the wide appeal of audiobook downloads (One professional listened to 100 books in a year where normally he would have read only 20.); (c) heard (and read) a colleague's commentary on learning broadcast by National Public Radio and posted on its website (Romano, 2006); (d) listened to my two grandchildren each read their favorite book; (e) read aloud several books to them before they went to sleep; (f) listened as reporters read aloud from teleprompters on the TV news; (g) found to my delight that an excerpt of *Kite Runner* (with author Khaled Hosseini, 2003 reading in his authentic accent) was loaded on our new GPS; (h) revised this manuscript by rereading it orally, for as Klinkenborg (2005) suggests, " my ear is still vastly smarter than my eye;" and finally, (i) enjoyed readings of the Koran and the scriptures as well as our pastor's sermon--the script of which will be posted on the internet later in the week.

No, aurality has not been erased. Why? …Because voice is at the very core of Western literacy. *Written words need voice.*

Voice
infuses shades of meaning,
gives words a musical and linear flow,
allows a listener to absorb intricate and complicated language,
makes passages graphic and vivid,
stirs memory and remembering,
cries forth knowledge and learning,
threads and binds together the experiences of people,
calls out of silence, the words on the page.

To be seduced by the printed word coming to life,
how great is that!
(Preston Wilson, 2005)

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16.

Footnotes

[1] In today's world, there are many opportunities on a daily basis to read aloud or listen to another person read. First, is the most overt; school and family storytime read-alouds with children. While not as apparent, much of the news and information broadcasted on both radio and television is actually read. Station websites often have a word-by-word transcription of what is heard on air. Wisconsin Public Radio carries "Chapter a Day;" thousands of digital audio books are available for MP3 players and I-Pods; and in fact, "the growth in audiobooks is outpacing overall public library circulation" (Harmon, 2005, p. 2). Minutes and announcements are read to groups; sermons and scriptures, at church. Authors do readings at bookstores and libraries; our President and other politicians read speeches from teleprompters, and audiences listen to conference presenters give scholarly papers.

[2] For publications on fluency see Blevins & Lynch, 2002; Breznitz, 2005; Callella & Fisch, 2003; Campbell, 2001; Doyle & Bramwell, 2006; Gosa (2005); Johns & Berglund, 2002; Moskal & Blachowicz, 2006; Polette, 2004; Rasinski, 2003; Rasinski, Blachowicz, & Lems, 2006; Richardson, 2000; and Samuels & Farstrup; 2006.

[3] Variant uses of *aurality* occur in the literature. Sometimes the term is classified under "orality;" other times, under "literacy," or both. *Aural* means "of or received by the ear." Generally, aurality refers to "listening or hearing" and has been applied to social history research of the senses, oral histories, music, radio and other technologies like computer simulations. For instance, Brothers (1997) uses the "paradigm of aurality" to denote music learned and created by the ear without the use of notation; Smith (2001, 2003) refers to aurality in a historical sense as the broad range of sounds mediated through the ears of people in our past--as in "listening to the sounds of nineteenth century;" Bernstein (1998) sees aurality as "the sounding of the writing" (preceding orality) as evoked in the performance of poetry aloud; and Gilson-Ellis (2003) considers the unique engagement of orality/aurality and written energies that combine when a contemporary author is also the performer of the text. In her research, Colman (1996) applies *aurality* specifically to the mode of transmission and reception of medieval literature through public readings. The term has become standard in the field of medieval studies (Melve, 2003). For my purposes, I have adopted Coleman's meaning and extended it to include reading of all types of texts to a listening audience of one or more persons in intimate or public settings.

[4]For historical perspectives of the shift from oral to silent reading see Allington, 1984; Gaffney & Anderson, 2000; Harrison, 2000; Hoffman & Segel, 1983; Pugh, 1978; Rasinski, 2003, 2006; Resnick & Resnick (1977), Samuels, 2006; Smith, 2002; and Venezky, 1991.

[5]Socioculturism in literacy studies has a 30-year history. In the 1980s, anthropologists and ethnographic researchers documented the critical importance of cultural compatibility between school and home communities, including the various language and literacy practices involved (Heath, 1983; Tharp & Gallimore, 1988). These studies and those of Finnegan (1988) and Street (1984) support the pervasive intermix of oral and literate modes in societies. For descriptions of New Literacy Studies see Barton, Hamilton & Ivanic, 2000; Collins & Blot, 2003; Gee, 1996, 2000; Gee, Hull & Lankshear, 1996; Lankshear & Knobel, 2003; and Street, 1995, 2001.

[6]For this model Coleman drew on the multimodal theories of Finnegan (1988) and other sociocultural scholars. Coleman's model is not without its problems and could be visualized as a Venn diagram to show overlap of the domains and mixed nature of oral and literate modes. For my purposes, I simplified Coleman's scheme particularly in the perorality domain since that mode does not fit within the scope of my discussion. In addition, I extended her use of the term "book in medieval literature" to the broader notion of "any text from classical antiquity to contemporary times."

[7] I have only included a few examples of Pedagogical Rituals to give the reader a sample of the many paintings that have to do with scholarship, teaching and literacy instruction. My 2006 ARF Conference presentation expanded this section more fully.

[8]Like the Greeks and Romans before them, Europeans and Americans used a similar oral process for learning to read up through the late 1800s—called by many names (the synthetic approach, alphabetic method and ABC method). First, children learned to say the letter names, usually in order, and then mastered the sounds of syllable variations with these letters (e.g., *ba, ca, da)*. Lastly, they learned to read words aloud separately and then, in continuous text (Mathews, 1966). Oral repetition was an integral part of learning. Students would reread many times in order to gain fluency or memorize whole sections to be recited without aid of written text.

[9]These clerics are chanting the mass, instead of just reading it. Chanting and singing of songs with words is another form of oral reading that could be included in religious as well as secular entertainment aurality rituals.

[10]This painting is also a Caring Ritual as described in the last section, but for content integrity, I have placed it with the discussion of HCA.

[11]This line of study is ripe with research possibilities. The intertwine of art history and literacy for the most part, is unexplored except for a few scholarly works (Apsar, Higgins & Striegel, 1996; Bollmann, 2006; Stewart, 2003, 2004). Even fewer studies and articles explore the benefits of art education and the study of paintings on literacy skills (Clyde, 2003; Korn, 2005; Piro, 2002). Hamilton's (2000) descriptive analysis of literacy events as captured in photos (using criteria of participants, settings,

artifacts and activities) may be a useful model for studying paintings. Another possible avenue of research is the examination of how the instantiation of literacy practices in a historical perspective through art may give both students and teachers of reading not only insight into covert and anomalous practices that affect contemporary reading/writing behaviors, but also appreciation of the meaning and value of dominant practices.

[12]In her study, Ruth Hamilton (2000, p. 20-21) used a similar kind of descriptive statements to identify the various themes in her data (e.g., literacy as threat, defiance, evidence, accessory, display, and public gesture).

Figure Captions

Figure 1. Aurality Rituals in Paintings: Pedagogical, Religious, Informational, Entertainment and Caring.

Figure 2. The Place of Aurality in Oral/Literacy Theory. Adapted from Coleman, 1996. pp. 34-42, Transmission and reception modalities of literature.

Pedagogy Rituals

Figure 3. Youth reading to another with a lyre and an older man by Akestorides painter, a follower of Douris, Ca. 470 BCE. Red-figure cup, ARV (2) 781.4; Smithsonian, Washington, DC #136373. Image Source: Beazley, J. D. (1948), Hymn to Hermes. *American Journal of Archeology*, 52, 336-343, Plates 36 and 37. Image also available at http://ccat.sas.upenn.edu/awiesner/bookimg13.html

Figure 4. Hugh of Saint Victor from *De arca noe*. Late 12th or early 13th century. Manuscript illumination. Ms. Laud Misc. 409, fol. 3v, Bodleian Library, Oxford. © Permission by Bodleian Library, Oxford. Image Source: http://ccat.sas.upenn.edu/~rs002/Images/Christian/hughstv.jpg

Figure 5. A lesson in theology at the Sorbonne (detail) in *Postilla in Bibliam* (Pentateuch) by Nicolas de Lyre. Ca. 1480. Manuscript illumination. Ms. 0129, fol. 32, Bibliotheque Municipale, Troyes, France. © Permission by Bibliotheque Municipale, Troyes, CNRS-IRHT. Image Source: Enter Troyes - BM - ms. 0129 in Code and Return at http://www.enluminures.culture.fr/documentation/enlumine/fr/rechexperte_00.htm

Figure 6. Solomon teaching his son in historiated initial P in *The Bible of Robert de Bello'*. 1240-1253. Illuminated manuscript, Ms. Burney 3, fol. 234. British Library, London. © Permission by The British Library.   Image source: http://www.bl.uk/catalogues/illuminatedmanuscripts/ILLUMIN.ASP?Size=mid&IllID=11303

Figure 7. The Schoolmaster by Gerrit Dou. 1645. Oil on panel, 27 x 19.4 cm. The Fitzwilliam Museum at the University of Cambridge, UK. © Permission by Art Renewal

Center, Fred Ross, Chairman. Image source:
http://www.artrenewal.org/asp/database/image.asp?id=30066 (If link will not open. paste the URL in Browser.)

Figure 8. Anne and the Virgin (detail) in *Alfonso Psalter*. 1284. Manuscript illumination, Ms. Add. 24686, fol. 2v. The British Library, London. © Permission by The British Library. Image source:
http://ibs001.colo.firstnet.net.uk/britishlibrary/controller/subjectidsearch?id=11304&startid=38232&width=4&height=2&printable=1

Figure 9. The Education of the Virgin by Peter Paul Rubens 1625. Oil on canvas, 193 x 140 cm. Musées Royaux des Beaux-Arts de Belgique, Brussels. © Permission by Web Gallery of Art, Emil Kren, Creator. Image source: http://www.wga.hu/frames-e.html?/html/r/rubens/13religi/index.html

Figure 10. The Reading Lesson by Gerard Terborch. 1669. Oil on wood, 27 x 25.3 cm. Musée du Louvre, Paris. © Permission by Web Gallery of Art, Emil Kren, Creator. Image source: http://www.wga.hu/frames-e.html?/html/t/terborch/3/readin_l.html

Figure 11. Signboard for a Schoolmaster by Ambrosius Holbein. 1516. On pine panel, 55.5 x 65.7 cm. Kunstmuseum, Basel. © Permission by Web Gallery of Art, Emil Kren, Creator. Image source: http://www.wga.hu/frames-e.html?/html/h/holbein/ambrosiu/signboar.html

Figure 12. The School Master by Adriaen Jansz van Ostade. 1662. Oil on canvas, 40 x 32.5 cm. Musee du Louvre, Paris. © Permission by Web Gallery of Art, Emil Kren, Creator. Image source: http://www.wga.hu/frames-e.html?/html/o/ostade/adriaen/2/school_m.html

Figure 13. Village School by Louise Eudes de Guinard. 1860. Oil on canvas, 32.5 x 40.5 cm. Private Collection. Image source:
http://www.artnet.com/Artists/LotDetailPage.aspx?lot_id=677EB338A25BA4F7

Figure 14. School Exam by Albert Anker. 1862. Kunstmuseum, Bern. © Permission by Kunstmuseum, Bern, Switzerland. Image source: (Site under construction at http://www.kunstmuseumbern.ch/index.cfm?nav=1245,1398,1444&DID=9&SID=2 Image also available at http://www.kunst-fuer-alle.de/deutsch/kunst/kuenstler/poster/albert+anker/11573/1/76757/the+school+exam,+1862/index.htm

Figure 15. The Country School by Winslow Homer. 1871. Oil on canvas, 54 x 97.2 cm. St. Louis Art Museum. Courtesy of The Athenaeum. Image Source: http://www.the-athenaeum.org/art/detail.php?ID=471

Figure 16. Stay in School by Melvin King. Ca. 2000. Artist's Collection. © Permission by Artist. Image source: http://www.melvinking-arts.com/stayin.html

Religious Rituals

Figure 17. Ezra reading the rule. Ca. 245 CE. Detail of a wall painting at Dura Europus synagogue, Syria. © Permission by Michael Marlow, Bible Resercher.com. Image Source: http://www.bible-researcher.com/headcoverings3.html

Figure 18. Moses reading the rule, detail of Tabernacle from *The Ashburnham Pentateuch*. 7th century CE. Manuscript illumination, 371 x 321 mm. Ms. nouv. acq. lat. 2334, fol. 76r, Bibliotheque Nationale, Paris. © Permission by BNF-Gallica. Image Source: http://visualiseur.bnf.fr/Visualiseur?Destination=Daguerre&O=8002428&E=JPEG&NavigationSimplifiee=ok&typeFonds=noir

Figure 19. Moses dispensing the law, detail from *Moutier-Grandval Bible*. 834-43 CE. Manuscript illumination, 510 x 375 mm. Ms. Add. 10546, fol. 25v, British Library, London. © Permission by The British Library. Image source: http://www.imagesonline.bl.uk/britishlibrary/controller/subjectidsearch?id=9432&startid=2344&width=4&height=2&printable=1

Figure 20. Synagogue from the *Sister Haggadah*. Mid 14th century. Manuscript illumination, 23.2 x 19 cm? Ms. Or. 2884, fol. 17, British Library, London. © Permission by The British Library . Image source: http://www.imagesonline.bl.uk/britishlibrary/controller/subjectidsearch?id=8987&startid=29507&width=4&height=2&printable=1

Figure 21. Saint Benedict and monks being read to at mealtime, detail from the Stories of Saint Benedict by Giovanni Antonia Bazzi (Sodoma). Ca.1503. Fresco detail at the Abbey of Monteoliveto Maggiore, Tuscany. Image source: Sarah Dowhower, photographer. See also http://www.museum.upenn.edu/new/events/world_tour/itinerary.shtml

Figure 22. Hedwig listening to a reading, detail from *Vita beatae Hedwigis* (*The life of the blessed Hedwig*), 1353. Manuscript illumination. Ms. Ludwig XI 7, fol. 46, The J. Paul Getty Museum, Los Angeles. © Permission by The J. Paul Getty Museum, Los Angeles. Image source http://www.getty.edu/art/gettyguide/artObjectDetails?artobj=4373

Figure 23. Bishop Engilmar celebrating mass from an Ottonian benedictional. 1030-1040. Illuminated manuscript, 9 1/8 x 6 5/16 in. Ms. Ludwig VII 1, fol. 16, The J. Paul Getty Museum, Los Angeles. © Permission by The J. Paul Getty Museum, Los Angeles. Image source: http://www.getty.edu/art/gettyguide/artObjectDetails?artobj=3484

Figure 24. Office of the Dead scene detail from *Rohan book of hours*. 1415. Illuminated manuscript, 25.4 x 17.8 cm. Ms. lat. 9471, fol. 182, Bibliotheque Nationale, Paris. © Permission by BNF-Gallica. Image Source: http://visualiseur.bnf.fr/Visualiseur?Destination=Daguerre&O=8008798&E=JPEG&NavigationSimplifiee=ok&typeFonds=noir

Figure 25. Christmas Mass from *Les tres riches heures du Due de Berry*. 1416. Illuminated manuscript, 294 x 210 mm. Ms 65, f. 158r, Musee Conde Chantilly, France. © Permission by Christus Rex, Inc. Image source: http://www.christusrex.org/www2/berry/f158r.html

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Research Discourse for Education Undergraduates

Writing for Empowerment: Research Discourse for Education Undergraduates

Rosalind Raymond Gann, Jessica Buell, Cindi Ramsey, Constance Rosenbalm

East Tennessee State University

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In the faculty room, my colleagues in the Curriculum and Instruction

department and I exchanged gripes about student writing:

They can't write research papers

They emote; they don't observe.

They can't do citations

Why can't they analyze problems?

And so on. We were talking about students in teacher education— juniors and

seniors we had selected for teacher training, who made satisfactory marks in a year

long English course, and in all other aspects of undergraduate study. While spelling

and grammar were reasonably good, objective writing, it appeared was beyond them.

When asked to describe the process of a tutoring session, they produced narratives

which read something like this:

I went to see Lillie Jane, who is the daughter of my friend Katie who used to

work with me at MacDonald's. Lillie Jane is five years old, and she was wearing the

cutest little T-shirt with lace around the neck and matching overalls. I wrote my notes

in a little pink notebook I use for special things. Lillie Jane likes to play with dolls—

what little girl doesn't—and she knows all her letters. We sat down on a big, white

comfortable couch and started reading out of The Golden Book of Favorite Stories...

And on and on.

The students gazed at us injured and doe-eyed when they received less than

stellar grades on these productions. What was wrong?

The fault, I think was partly ours. In the English sequence students took before coming to us, much writing was personal. Then in our program, students journaled about placement experiences, which contained often more personal material than we ever asked for or cared to read. But because their journals included information and reflection, they were awarded good grades. The students apparently generalized their personal narrative style to other assignments. While the students could write clearly in English, they did not control academic discourse. Gee's work on Discourse and identity provides a useful framework for understanding the students' difficulty (1999). In this framework, a Discourse is not simply a style of writing but a complete "identity kit" which shapes and is shaped by a particular view of the world. Gee capitalizes the word when he uses it in this broad sense; when considering language-in-use and stretches of text, he writes it writes it uncapitalized, 'discourse.' For Gee, a Discourse includes not only the rules for expression in speech and writing, but imposes global rules for self-expression, and for organizing and perceiving reality in a particular culture, enterprise, or discipline. It dictates the style in which questions are posed and addressed, and contains complex rules as to which questions may not be asked at all. Marxism is a discourse; so too is whole language reading theory, fundamentalist Christianity and academic writing.

Our students' clumsiness in writing academic English resulted, stemmed, it would seem, not from an inability to write English prose, but from a failure to acquire the Discourse appropriate to observation in education. They enjoyed planning lessons

and developing classroom activities and this evidenced an awareness of underlying educational theory. How could we help them conceptualize and write in a more objective way?

<div align="center">Possible Approaches</div>

Gee (1999) distinguishes between primary Discourses acquired in early childhood and those learned later. Southern Mountain English, Cantonese, and Midwestern English are primary linguistic Discourses, which may be absorbed unconsciously as we learn to speak (Pinker, 1995). We acquire them as we mature, just as we learn to use forks or chopsticks. Academic writing is not a primary Discourse acquired in infancy. All of us learn it later and because we are taught. But the amount, intensity and content of necessary instruction varies with past experience with language, the nature of our experience as readers, and our familiarity with academic culture. We not only learn Discourses; we absorb the identity and approaches to the world which they embed (Gee, 1999).

It has long been acknowledged that university students require instruction in academic reading and writing. In her pioneering *Errors and Expectations* Shaugnessy (1977) argues against labeling struggling academic writers as "disadvantaged" and offers specific suggestions for working with developmental writers. Shaughnessy's work with developmental students at the City College of New York challenges us not to be dismissive of students who fail to control academic genres when we meet them. Dismissiveness can be played out in many ways, and need not culminate with the

students' failing our courses. When, as faculty members, we griped about student writing without addressing the problem, we were also being dismissive. It can be easier to "lower the bar" and assign genres with which students have experience than to insist on more challenging projects. Fitts (2005) speculates that many college students subtly encourage their teachers to assign them writing connected to feelings because they grew used to such assignments in high school. Personal writing is a Discourse they control (Gee, 1999). Similarly, many of our undergraduates had earlier been schooled in what Wood (1997) calls the *traditional* approach emphasizing grammar and vocabulary. Then as part of the undergraduate program, students had been required to take several "writing intensive courses" which utilized a process approach involving prewriting, editing, and the preparation of several drafts. But the tone of their writing had remained essentially personal.

Students' failure to acquire the academic writing genre could be due in part to the way students processed what they read. There is, after all, a recursive relationship between the way we read and the way we write. Caverly, Nicholson & Radcliffe (2004) note that critical reading involves metacognitive and affective processes closely related to effective writing. Similarly, Rao (2005) notes that contextualized writing goes hand in hand with reading and fosters the development of critical reading. Some authors advocate specific instruction in summary writing for students struggling with academic literacy Friend (2001), but in our department, many

instructors were employing these methods, and the results did not carry over into other varieties of exposition.

Perrin (2004) argues in favor of individualized instruction in writing centers, which, the author believes more effective than remedial writing courses. Our university has an excellent writing center which many students visited; however, the problem of overly personal writing remained.   Perhaps the problem was one of exposure. Today's students are very accustomed to literacies embedded in electronic technology, but less comfortable with paper journals and print. Several authors note there is a changing interface between literacy and technology. Kuehner (1999) observes that rapid technological change is making computers ubiquitous in teaching reading and writing. Williams' (2005) even extends the definition of "writing" beyond conventional rhetoric to include the ability to use graphics and argues for specific instruction in visual communication because images carry extraordinary power. Quible (2005) notes that the blog is becoming a dominant literacy and suggests it can be used for writing instruction.

Our Approach

This reflective paper describes our experience in developing a course to help elementary education students at East Tennessee State University write objectively as educators. There were several factors to consider in planning. We wanted students to develop research writing skills that would serve them well in our program and beyond. Probably because of the emphasis on positivistic research in our science

curriculum, our students seemed largely unaware there was such a thing as qualitative research, although they had read many examples. For us, this was not only an academic issue, but a professional one. Qualitative research is most easily carried out in classrooms. Stephens (1998) observes that we have lost control of the knowledge making in our field. Since the advent of the National Reading Panel, teachers are increasingly required to implement programs developed by researchers from other fields; most such investigators have never taught reading.   It made sense to empower students as disciplined observers and objective writers both to augment their individual skills and to interest them in research as an integral element of practice. We also hoped to develop an awareness of the cultural function of literacy (Fishman, 1988), as this was a gap in our curriculum. Our upper level reading courses focused on pedagogic and methodological issues rather than on broader issues in literacy.

To address these needs, our Curriculum and Instruction faculty developed a one hour, semester long course, *Current Issues in Literacy* in which students would learn to write objectively. The course would be the first in our Elementary Education sequence, so students would be prepared for the writing tasks awaiting them later in the program. Because in our college APA style is used almost universally, this manner of formatting would be taught. The major requirement in this writing intensive course was the preparation of five APA style papers of increasing difficulty about literacy in our society. To provide background for the writing, there would be several readings to complement presentations by the instructor and class discussion.

We developed assignments to foster objective observation about literacy-related topics and appropriation of educational Discourse. The first assignment was a self-observation of literacy in daily life. Students were instructed in objective writing and collected data on what they read and wrote over a period of several days. They learned to prepare their work in standard APA form with introduction, methodology, results, and concluding sections. Later papers introduced the use of outside sources, the writing of a literature review, the inclusion of interview data and the preparation of bibliographies and abstracts. In one assignment, students examined the changing face of education in the Southern Mountains, where our university is located.   For this paper, they read Stewart's classic *The Thread that Runs So True* (1949) and interviewed an older member of their families about educational experiences. To help students realize that tone is affected by subject, we permit a slightly more personal approach in this assignment. A culminating paper on the *No Child Left Behind Act* required multiple outside sources and an interview with a practicing K-12 teacher. Mini lessons (Atwell, 1998) on editing and such topics as parallel structure are presented on an "as-needed" basis.

Admittedly, this was a great deal of work for one credit, and many students complain about all the writing. Frankly, we would have preferred for *Current Issues In Reading* to be a three hour course. But our students may only take a limited number of hours in education, so we could not increase the course hours; however, the

availability of writing intensive credit, required at our college was partial

compensation.

<div align="center">Enacting the Program</div>

No course is uniformly successful, but judging by the reactions of our faculty,

and those of the students, *Current Issues in Literacy* has been extremely successful in

teaching our students to write academically. Intensively, and over a short time, the

course fosters an ability to write objectively and think critically. While students

sometimes feel burdened by the amount of work, most are appreciative of the

academic gains they make in the course. We have found that the students enrolled in

the course fall in three groups. Some have experience with research writing, but have

not done critical papers in education; they struggle with APA style. A second group,

the largest, show reasonably well-developed writing skills in journals and personal

essays, but have little or no experience with objective writing. Finally, a smaller

group, struggles with writing of any kind. These students had difficulty with the

English composition sequence, and their problems in writing continue. At the time

they enter our program, some members of this group could still be classified as

developmental students.

In this section, I present representative statements by three "graduates" of the

class. These students were collaborators on this article, and are credited as co-

authors, not anonymous subjects of research. To address institutional requirements, I

listed them as research subjects in a protocol submitted to the Institutional Review

Board (IRB). But their contributions should be viewed as those of collaborators and

colleagues, rather than data from qualitative research. The first statement is by Cindi

Ramsey, a "non-traditional" student, i.e. one who did not come to our university

directly from high school, but has had years of intervening life experience. Many

such students have family responsibilities and full-time employment. This was true of

Ms. Ramsey, who had a strong business background. Her child was in middle school

when while Ms. Ramsey was enrolled in READ 3000. Ms. Ramsey had moved

through our program very gradually, and had therefore experienced the changes in our

curriculum over time. Ms. Ramsey had some experience in academic writing, but had

never collected interview data nor integrated it with knowledge about literacy in

society.

Student opinion: Cindi Ramsey

Current Issues in Literacy [is] … a junior level course… Obviously, it is of

great importance for students to understand and be able to write papers in the APA

style; many professors expect students to be able to do this without having to take

their class time to teach it. [This course] teaches the students how to conduct their

own research in order to interpret data collected by themselves. Conducting one's

own research and constructing an APA paper from it is vastly different than merely

studying someone else's findings.

…[The instructor] began by teaching students how to construct a basic APA paper.

Students were to study their own literacy; reading activities were recorded in two hour

blocks for two days. My research paper, entitled "Literacy: A Study of My Daily

Life," surprised me by making me aware of how much I read without even realizing

it… Gradually [we learned]… more about APA research, including interviewing

techniques. Another paper I wrote, entitled "Literacy in Schools: A Study of Popular

Views," not only included research conducted from magazines that were not

professional journals, but also included an interview with the mother of a student.

The mother I interviewed was in agreement with what the ETSU College of

Education Department teaches education majors about teaching children; she

definitely thought teachers should be using hands-on activities to make literacy more

palatable for students. She was not in agreement with what is learned as an education

student, however; she believed teachers should only teach the classics rather than

including trade books and popular literature. This assignment taught me how to

construct a complete APA paper while teaching me how the public regards literacy

education at the same time.

Current Issues in Literacy is a unique and valuable course… Students … learn

about the many aspects of teaching literacy, such as whole language versus phonics

and the historical background of teaching literacy in the United States. Students who

complete this course have a firm grasp of public and educational opinion as well as

research and writing techniques that will serve us well as we complete our

undergraduate courses and will also serve us in the future as we seek master's degrees

and doctorates.

Ms. Ramsey had experience academic writing prior to taking Current Issues in Literacy and felt the course increased her competence. By contrast, Connie Rosenbalm had little experience with writing in academic discourse. In many ways, she was a strong writer. Her vocabulary and organization were excellent, and there were no significant problems in mechanics. Her writer's voice was strong. But she had not written objective pieces. Over the term, this student learned to use academic Discourse clearly and effectively. In her final paper, she advanced an argument against the *No Child Left Behind Act* which I, as a Northerner I had never heard— namely that it violated states' rights. Her ability to integrate objective writing into her value system evidences how fully she appropriated academic discourse and made it her own.

Student opinion: Connie Rosenbalm

Prior to enrolling in this course, my writing experience consisted mostly of creative writing assignments and business writing. *Current Issues in Literacy* is a one hour technical writing course offered at East Tennessee State University for pre-service teachers. During the semester, the class explored many current topics in education. Reading assignments … were incorporated into class discussions and offered an introduction to writing assignments. Throughout the course… [we were] taught research writing skills and APA formatting in progressive phases. The first assignment for the course was a brief self-study paper that required nothing more than gathering data from observations of our personal use of literacy. This assignment

contained the extreme basic structure of an APA research paper; a title page and five basic headings. In the following assignments the paper's structure expanded to include appendices, references, literature reviews and abstracts.

… Each class [began] with a brief lecture on the elements and characteristics found in the section. For example, literature reviews were to be brief overviews of an article, not lengthy summaries. Dr. Gann provided handouts outlining the new section being added to the next paper, which served as an example of correct structure and tone.

At the beginning of the semester, I struggled with the format of the APA paper… With each paper… [I was] offered ways to improve upon my writing. I had never been given so much feedback on one paper. I welcomed the constructive criticism and used it to improve my writing. I also met with… [the instructor] outside of class to discuss problems I was having. During these meetings, she was very supportive and offered honest as well as critical instruction that assisted me with my writing.

The No Child Left Behind Act: One Teacher's Opinion was the final assignment completed for the course. Therefore, it contained more elements of an APA research paper when compared to earlier papers. It contained the same basic structure as previous assignments, but required an abstract as well as more critical analysis of the data collected. The assignment was to examine the *No Child Left Behind Act* through journal article, critiques and an interview with a K-12 teacher. I

began the assignment by gathering information about NCLB from juried publications. After reading many articles, I decided to focus on the issue of states rights and their loss of autonomy. Next, I interviewed a high school social studies teacher and discussed the satisfaction and dissatisfaction that he had as a teacher. During the interview, the teacher and I discussed NCLB and his opinions regarding the legislation. His opinions were similar to that of the articles I chose for my paper. Finally, I critically examined the data collected through the interview and articles.

With this final paper, I feel that my research writing skills have improved tremendously when compared to my writing at the beginning of the course. I am more confident in my writing abilities, both grammatically and structurally.

Student opinion: Jessica Buell

Ms. Rosenbalm and Ms. Ramsey were reasonably strong writers before they enrolled in *Current Issues in Literacy.* The situation was different for Jessica Buell who came to East Tennessee State University from a small mountain high school where the offerings were general, and an academic sequence had not been unavailable. Although she had passed basic English composition, this student still struggled with writing at a fairly rudimentary level. She spoke a robust form of Southern Mountain English—not at all unusual for our students-- and had little concept of which dialect features could not be used in formal writing. We met privately many times. Often, she brought drafts of her papers, so we could critique

her work before grading it. She worked very hard and made great strides in her ability to write in the academic genre. About her experience in the class, she says:

> I at first found [this course] frustrating because it was different from anything I had every done. It took me a few papers to get the hang of it and it took me until the end of the semester to become confident. I began enjoying writing this way. In a summer science education class, our class was asked to write a paper using APA, and when I turned mine in she was impressed. The instructor said she just thought we knew how to use APA for our references but she enjoyed my paper in APA style, and I found it an easier way to write a research paper. Professors are impressed that I as an undergrad I know how to write this kind of paper. Any time I can impress a professor I take the chance.

Having overcome her difficulty in using academic discourse, this student has been able to proceed with her program with increased confidence.

Why We Feel Strongly About *Current Issues in Literacy*

In our *Current Issues in Literacy* class, no student is labeled as "developmental." We believe most undergraduates need help in mastering academic discourse. Some students arrive having done more academic writing than others, but we think every student in undergraduate education can benefits from opportunities to do critical writing and observation in literacy. Where review of basic English is needed, we provide it either in comments on papers, individual sessions, or class-wide "mini-lessons" (Atwell, 1998).

By providing this course to all undergraduates in elementary education, we hope to develop in our students a sense of responsibility for knowledge-making in our field. Our education students seem more aware of research which includes hypotheses and control groups, rather than action research, which can actually be carried out by teachers in classrooms. *Current Issues in Literacy* provides a foundation in objective writing for research, which may later translate into independent observational projects (Mills, 2000). We are committed to *educating* new teachers for knowledge making, rather than to *training* them to implement other people's ideas. For we want to develop teachers who ask, "If what I am doing is not working, how can I do things differently today?"

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Keynote Address Précis: On Predicting Big Things in Literacy Research: Trendlines, Perennials, Serendipity and Stealth

George, G. Hruby
Utah State University

Abstract: A Presentation Brief of highlights from the closing general session presentation and open dialogue session on Predicting Big Things in Literacy Education Research and Practice.

Let us acknowledge that a paucity of data makes analysis of the future difficult. Moreover, if a cursory review of the historical record is a fair indication, our field has never been very good at collectively predicting the future. Yet, as a self-confessed scientific instrumentalist (Cacioppo, Semin & Berntson, 2004), I find speculating on the "Next Big Things" in reading and literacy education, as I have been invited to do here, irresistible. After all, we can construct a future with fewer apologies than we can openly construct the past or present, but the goal is the same: fashioning useful heuristics to negotiate our current and impending environment on behalf of a more fruitful and satisfying condition. I will therefore first briefly address some of the reasons for our poor speculative track record, and then nonetheless stick my neck out and make some obvious and some not-so-obvious predictions for the decade ahead regarding future trends in literacy education.

As a field, if fields can be said to have anthropomorphic tendencies, we have never been very good at predicting the future because arguably we are usually rather poor at gauging the present. This is true on several scores. First, we tend to hold the legacies of the past (in which we are typically professionally invested) in higher esteem than the present. As a result, when gauging our "scholarly present"—an echo of yesterday's ethos—we pay too much attention to less than current phenomena. This is an inherent disability of academe generally. The academy, a graduate student once told me, is a cultural museum, a place where lively new ideas go to die to be embalmed in the rhetoric of evening graduate seminars. Ouch. But he may have been on to something.

Second, as a discipline among disciplines, educational scholarship seems to lag behind the curve of the academy—about 7 years behind the current theory, foci, and concerns of the humanities—and even further behind the state of the sciences, including the social sciences. For instance, when authorizing our efforts in classroom ethnography, we have often heavily cite singular cultural theorists from the early 1970s, even as anthropology since that decade has invested itself ever more subtly and profoundly into the insights of biological and ecological theory. When we authorize our research in reading development, we too often build our models of developmental change on citations of Piaget and Vygotsky from the early 20th century, rather than from the idioms manifestly obvious in the past three editions of the *Handbook of Child Psychology* (e.g., Lerner & Damon, 2006). And when we wish to anchor our thinking about sociopolitical phenomena, we are wont to cite Hegelian and Marxist constructs from the 18th and 19th century, more recently rearticulated in mid-20th-century Frankfurt School motifs. Notably, many critical literacy theorists came loudly out of the closet as dedicated Marxists only after the disbanding of the Soviet Union and the end of the Cold War. Such anachronicity seems to suggest a burden on our powers of prognostication.

Third, being American educators and therefore implicitly progressive, if no longer Progressivist, we are far more vibrantly dedicated to our desires about how the world should be than we are with the way the world is or where it is going. It can be argued, however, that getting the world to where it should be is a lot easier when you understand how the world is than when you do not. As the old saying has it, you can get almost anywhere you want on a good horse, but it is easier when you ride it in the direction it's facing. (Lest I sound scolding, allow me to confess to being guilty of all three of these shortcomings, but I will here try my best to outgrow them.)

A final reason for our failure to predict the future with any precision is our reliance, as good researchers ever mindful of the need to quantify anything potentially phenomenal, on the identification and measurement of social, political, and cultural trends. When it comes to trend spotting, the devil is in the data points. Linear, curved, sine-wave, or cyclic, trend patterns can only ever be crude simplifications. Human capacity for academic abstraction and pattern identification is no match for the vagaries of the larger-than-human world. Following Heraclitus, we never really step into the same river twice. When we think we have seen it all before – something we are more wont to claim as we get older – the truth is that we have been forced, both by neurological processes and failing perceptual abilities, to rely evermore on our prior knowledge. (We start this decline, I have read, around age 9 when the secondary receptor sites on the pyramidal neurons in our hippocampus begin to shut down.) Thus, the trends we claim to perceive are probably more a reflection of the patterning of our prior knowledge, or the design of appropriated cultural contrivance, than the mark of a dependable tendency in the natural or social world.

For this reason, in my prognosticating I will not rely solely on trendspotting and perennial pattern-matching. I will also rely on a heightened regard for serendipity in human affairs, and a cautious concern for stealth in human contrivance. (I also have taken considerable time and effort to consult a certain neon-colored inspirational libation at poolside Thursday evening, and that didn't seem to hurt either.) So forewarned, make what you will of my predictions, some obvious, some less so.

Obvious Expectations

1. *We will soon witness the return of meaning-based reading instruction*. I make this prediction not merely on the basis of preference. Nor do I claim that phonics-based reading instruction is unlikely to produce some of the results we seek in post-third grade reading scores.

Rather, I base this claim on trend lines that track a pendulum-swing pattern in reading instruction preferences over the past two centuries. (I thank Dick Robinson, Mike McKenna, and Terry Bullock for the early historical background—although I have also surveyed a number of reading pedagogy texts from the 1890s onward that substantiates several of these trend claims). Although precise methods and rationales change over time, the pendulum essentially swings between indicator-based and meaning-based approaches to teaching reading.

To start with the indicator approach, in colonial America, reading was taught "by the letter" with spellers. If you knew how to spell a word, it was thought, you could recognize it in print. C-A-T spells cat. And that was reading. In the 1820s and 1830s people like Noah Webster, Horace Mann, and some New England Transcendentalists,

argued on behalf of an alternative approach they thought was better suited for the needs of a democratic citizenry: reading for meaning by the word. Mann was particularly anxious that the frontier mobocracy that had elected Andrew Jackson be domesticated through ideas, rather than rote recitation. Interestingly, Webster's clear conflict of interest in this recommendation was arguably the beginning of a history of financial influence on American literacy instruction that would continue to this day.

By the late 19th century, the era of robber barons, unbridled immigration, industrialization, and spreading urbanization, America was back to reading by the letter through proper pronunciation and the "science of phonetics" (Professor Henry Higgins in *My Fair Lady* was a specialist in this field). Again, the idea was that to recognize the words on a page, you had to know how they were spelled; proper pronunciation (the pronunciation of the better educated classes) was supposed to be an accurate indicator of the spelling. But at the very least, this approach allowed you to sound as if you were well read, and purportedly allowed you to be passed off as a duchess at a royal ball.

But by the 1920s and '30s the US was back to reading for meaning by the word, this time with Dick and Jane. John Dewey, William Elson, William S. Gray, and other experience-oriented pedagogical theorists all had a hand in this shift. Gray developed an extensive range of readers for meaningful reading experiences. At the early reading level, this turn toward reading by the word manifested itself as the famous "look and say" or whole word approach, where the entire shape of a word would be taught, often with the assistance of encircling lines around the word, or colored backgrounds emphasizing the shape of the word. Later psychological research revised this method toward developing students' recognition of salient aspects of the word shape, such as the first letter, salient consonants, and word length. Explicit analytic (whole-to-part) phonics instruction was developed at about the same time (e.g., the Orton-Gillingham method), informed, in part, by Gestalt psychology.

By the 1950s, America was back to reading by the letter for sound with what was now finally being called phonics instruction (the part-to-whole variety). This was not quite what we mean by phonics instruction today, however. If you consult the materials from the time, this approach to phonics, like the previous proto-phonics approaches, was chiefly rationalized as a way to improve spelling and pronunciation ability (e.g., Horn, 1954). Explanations for how to use phonics methods in the reading pedagogy materials of the time was often included in the sections on vocabulary development (Wardeberg, 1963). Still, it was clearly a bottom-up, part-to-whole approach to alphabetics, it involved lots of drilling to skills, it tended to neglect meaningful reading of authentic texts, and was supposed to improve automatic response (response to letters without much thinking about them). This approach was also rationalized in Rudolf Flesch's *Why Johnny Can't Read* (1957/1982) as a means of inculcating the future citizenry against the dangers of communism.

By the late-1970s, the reaction within education and teacher colleges against behaviorist skill-drilling (and the ever declining ITBS scores that haunted public education from the early 1960s to the late 1970s) led to a re-exploration of experience-based constructivist pedagogy, bringing America back around to meaning-making reading approaches, a rediscovery of Dewey's progressive educational theories, and analytic phonics methods. Thanks to the influence of the cognitive revolution on educational research, and the psycholinguistic research base, whole language, a highly

meaning-centered approach, began to catch on in the 1980s. (For the record, ITBS scores turned around in 1979 and continued to rise into the late 1990s.) Despite its promise, whole language seemed to run afoul of its own unacknowledged contradictions and especially its reluctance to foster a well-structured approach for training prospective teachers in necessary concomitant skills and methods (Pearson, 2004).

In the 21st century we are again back to phonics, and for pretty much the same arguments, methods, and ideological rationale as before. But it will not be long, I suspect, before we are back again to reading for meaning. The sashaying of history encourages us to expect it. And I see two tangible causes for the coming shift. First, it turns out that fluency of decoding ability to automaticity, contrary to the claims of testing materials designers, may not be a correlate of comprehension, after all (Paris, Carpenter, Paris, & Hamilton, 2005). Fluency is a constraint on comprehension, but it does not actually foster it. The correlation between fluency and comprehension is a moderate one – about .45 – and it disappears after second grade. So good DIBELS scores will not alone translate into good adolescent readers (although I fear the upcoming "Striving Readers" proposals in Congress will lead us to try DIBEL-ing adolescent readers for a few years before we acknowledge the reality of these recent research analyses).

Second, the academic publishing industry will soon saturate the market with their phonics skill-drilling materials and they will then require a new set of materials to maintain sales figures and stock valuations. After all, it is not as if they are going to shut their doors and go out of business once they are done selling us what is once and for all scientifically proven to work. By the way, I also predict that Instruction #1 for use of these new materials will read – as did the last set – "throw out all your old materials…"

2. *We will see continued and possibly increased federal control of educational curriculum*. Much to my amazement, the Republican right has finally federalized American educational policy in a way that more moderate and reasoned legislators of the past had never dreamed of doing – and given a possible future Democratic administration or Congress precisely the tools it will need for articulating social policy through the school house. The possibility for a re-emergence of neo-progressive education may be upon us. I have qualms about any party trying to use the school house as a locus of political indoctrination for ideological purposes – but, on the other hand, I doubt it will ever translate into much of an effect on the body politic. However, such efforts could well distract from and thus hamper effective teaching.

3. *The money thrown at reading instruction in grades K-3 via Reading First may well demonstrate no discernable improvement of student literacy abilities either before or after third grade*. This will be because we already had the best 3rd grade reading scores of any educational system in the world before Reading First. What's was there to improve? The real problems in reading, as we know, start in fourth grade and extend beyond. As the government turns its attention belatedly to grades 4-12, demonstrating success will not come so easily. And when it does not come easily, calls for jettisoning "the failed policies of the past" will help foster our friend the pendulum swing (see #1 above).

But prior to that, we can expect to hear how this new initiative or that will essentially duplicate the "success" of Reading First by using the same instructional methods in middle and high school content area classes. All problems are fluency problems, it will be sagely observed. Early reading specialists will be drafted into secondary schools as reading coaches. Frankly, I know fluency is a problem with

struggling adolescent readers, but I doubt graphophonemic processing skills and literacy coaches are viable answers to the causes of poor fluency for most adolescent readers. We tried something like this back in the 1970s, and those who recall say it did not seem to help. For that reason I predict…

4. *In the years ahead, we will see increased attention to comprehension improvement methods and content area learning*. I expect a reappreciation for cognitive and social constructivist theories of learning and literacy abetted by psycholinguistic, neurolinguistic, and sociolinguistic research. The conundrum of just what the heck comprehension is will be an area of intense theoretical speculation and model building – which is to say, the past will continue to repeat itself.

Less Obvious Prognostications

1. As the nation tires of federal rhetoric and policy that destabilizes public education by bashing and defunding the schools, school districts, teachers and university-based teacher education programs, we will see a return to the issue of measuring individual student (rather than grade level) performance, and measuring teacher (rather than school) effectiveness. This last will be resisted, of course, but because it will be a trade-off on behalf of saving the schools, it will probably pass through. But given teacher shortages, jettisoning less good teachers is not a politically or administratively feasible solution. Increased teacher pay, financial incentives, and better teacher professional support will be required as part of a comprehensive solution. And up the road I see a truly national education system with plentiful and requisite teacher professional development, social and political respect, and adequate pay. No, really!

2. The increased use and occasional misuse of the new technologies by students for academic fraud has already received much media attention. I predict a firestorm will erupt regarding similar misuse by educational scholars and theorists. Accusations of plagiarism and invasion of privacy will be the headline makers, but the more substantive concerns will be unreliability of Internet sources (think Wikipedia), the foreshortened shelf-life of published research studies (the aversion to citing anything more than five years old), the evaporation of access to some "published" research journals, and the reduction of scholarship to the mere marketing of ideas. Also on the horizon, the pirating of public university teacher education course materials of the sort now offered by professors in online formats, by for-profit private companies trying to offer quicker, cheaper teacher training directly to those schools suffering teacher shortages – for a profit.

3. Teacher bias, especially regarding anti-minority and anti-male pseudo-psychiatric labeling, will be a future hot button issue. The use of personality trait psychology (the so-called Big 5 personality continua) for raising awareness of interpersonal bias between teachers and students in classrooms (and between school professionals regarding assessment of performance) will displace the current fascination with "learning styles" based on sensory-motor modality and multiple intelligences. This will probably start at the secondary level first.

4. And here's a scary prediction for 20 years out: Systems-based models of literacy development (and of school administration and operation) anchored in life-science models of ecological systems will expand in tandem with neurobiological educational interventions such as genetically modified viruses for brain re-development

training, and clinical (or even teacher-administered) biochemical assays for emotional and intellectual difficulty. If this occurs in sync with an increased appreciation and tolerance for human diversity, it could bring an end to the "special segregation" of students, but otherwise it will nonetheless be a field day for class action attorneys. Systems-based modeling, by the way, is something I think classroom researchers should not dismiss out of hand, but I am less certain about the psychopharmacological interventions. Perhaps we will get one without the other.

     5. Lastly, an economic downturn will put an end to half-baked arguments for disassembling public education. Private, for-profit companies are not up to the task of educating America's children and adolescents in any event, but during times of economic adversity it is hard to imagine how they could even be viable as business models once the tax divestiture to support them is pulled out. Moreover, during such economic adversity, the value of education as a social as well as an individual good will never be so obvious. In a word, the future for education could be brightest if bubble-based economics goes south. Your retirement portfolio won't be worth much, but you can console yourself that it is for a good cause—possibly with the assistance of neurobiological interventions like those neon libations down at poolside.

     So those are my predictions. Only time will tell if they are fair assessments of the future or academic elaborations of the past. I will only say it is not as easy as it looks. So now you try it. I look forward to hearing from you.

George G. Hruby
Utah State University
George.hruby@usu.edu

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Pre-Service Teacher Education for Diversity
By Debra Pane
Florida International University

Preparing teachers for children in poverty from diverse culture groups has not changed much since B. O. Smith (1969) first condemned teacher education for not addressing students of all social origins (Haberman, 1996). Traditional teacher education courses perpetuate the "normal science" (King, 2005, p. 7) paradigm of learning. In this paradigm, diverse students are viewed as being *at risk* or *disadvantaged* and whose successes are measured by universal standards. This way of thinking provides pre-service teachers with narrow ideas about teaching in urban and diverse schools (Haberman, 1996). As a result, widespread practices (e.g., ability grouping, tracking) of excluding diverse students' histories, experiences, cultures, languages, and values persist in our schools (Giroux & McLaren, 1986; Oakes, 1985). These systematic practices thrive on teacher-led instruction which limit the opportunities for underserved student populations to be involved in active cultural learning that builds on the knowledge they bring with them to school (Garcia, 1996).

Two strategies are generally used in U. S. teacher education programs for diversity: the infusion approach and the segregation approach. The infusion approach integrates cultural diversity throughout all courses and field experiences in a program. The segregated, or traditional, approach includes cultural diversity as a topic in a course or possibly one course in the program. Scholars prefer an infusion approach to teacher education for diversity because studies have shown little impact on teacher's attitudes, beliefs, and practices from the segregation approach (Zeichner & Hoeft, 1996). However, the segregation approach is most common. Success in broadening the university's traditional teacher preparation programs into inclusive frameworks for cultural diversity has been slow largely due to misconceptions about the notion of multicultural education.

Multicultural education was founded in diversity and is grounded in principles of democracy, equity, and justice. Controversy as to the definition and application of multicultural education ranges from the most common add-on techniques (e.g., learn about cultural food, holidays, and celebrities) to challenging racism in the curriculum (Hidalgo, Chávez-Chávez, & Ramage, 1996). The National Council for Accreditation of Teacher Education's (NCATE) requires teacher education programs to incorporate multicultural perspectives and cultural diversity. If the multicultural educational model is naïve (i.e., add-on technique), the program promotes a narrow curriculum for pre-service teachers, which focuses on celebrations, segregation of courses, and a general feeling of a lack of educator responsibility and knowledge about cultural diversity (Nieto, 2002; Banks, 1991).

Multicultural education courses and training are more common today, but they continue to be vaguely defined among five approaches (i.e., teaching culturally different students, human relations, single-group studies, multicultural education, and education that is multicultural and reconstructionism). Multicultural education typically focuses on more traditional pedagogical courses and training and reports little change in pre-service teachers' attitudes and expectations about culturally diverse students. The traditional view of teaching (i.e., transmission model which hands over information) has also affected the goal of the courses (i.e., attitude change) by

limiting the course content to superficial ways of convincing teachers to add culture into their lesson plans and attitudes (Hidalgo et al., 1996).

A growing number of "poor and minority students…reject what the schools have to offer and slowly but surely leave that painful environment" (Barone, Berliner, Blanchard, Casanova, & McGowan, 1996, p. 1138). This reality persists in the stark disparities in achievement between White students and students of color (Banks et al., 2005). Teacher quality is the single most important influence on students' educational successes and achievement (Delpit, 1995; Hollins & Guzman, 2005; Hooks, 1994; Ladson-Billings, 1994; Ladson-Billings & Tate, 2004; NPTARS, 2005). However, most secondary teachers are White and middle class and have had few experiences with students who differ from themselves (NPTARS, 2005). New teacher education pedagogies have been developed to prepare teachers for the diverse and poor students they will teach, but they focus mostly on what White middle class pre-service teachers do not know. This study examined how pre-service teachers come to know and perceive teaching for diversity.

Research Questions

It is generally agreed upon by the educational community that teachers are the major factor in influencing students' achievement (Hollins & Guzman, 2005). In response to the persistent disparities in achievement and resources between students of color and White students for the past two decades, demands on educators to have the knowledge, skills, and dispositions necessary to competently teach increasingly culturally and academically diverse and poor students are rising (Artiles & McClafferty, 1998; Chubbuck, 2004; Hollins & Guzman, 2005). The future of U.S. teacher education needs to rethink its traditional teacher education programs in order to adequately prepare its future teachers with the attitudes and dispositions needed to work with culturally and linguistically diverse and poor students (Hollins & Guzman, 2005; Zeichner & Hoeft, 1996). Preparing teachers to teach poor and diverse students partially rests on addressing teachers' low expectations of diverse and poor students, unfamiliarity with their students' backgrounds and communities, and lack of sensitivity to their own prejudices and values (Zeichner & Hoeft, 1996). Little evidence exists in the educational research literature of successful efforts to influence the dispositions and attitudes of pre-service teachers for cultural diversity over the long-term.

More conclusive research about successful teacher development which integrates issues of diversity with the rest of teacher education and the new teacher education is also needed (Cochran-Smith, 2005; Hollins & Guzman, 2005; Larkin, 1995; Whitehorse, 1996). A specific focus in pre-service teacher education on socializing teachers for teaching a culturally diverse student population has been given little attention. Little empirical evidence has been reported to support transformation in teacher thinking and practice over the short- or long-term (King, 1991; Larkin & Sleeter, 1995). Therefore, the growing need to help teachers attain the attitudes, knowledge, skills, and dispositions to work effectively with cultural diversity in their classrooms is essential (Zeichner & Hoeft, 1996).

A lack of empirical evidence to support the common sense conclusion that the predominately skills-based teacher training of today has little effect on changing teachers' deficit views about teaching and learning. Personal transformations necessary for learning to teach diverse student populations are definitely not addressed in the single course or one-shot workshops (Banks et al., 2005; Zeichner & Hoeft, 1996). On the other hand, there is evidence in

the extant literature about practices that facilitate greater sensitivity and knowledge about cultural diversity. But there is little evidence about practices and strategies that permit the development of enhanced intercultural competence among teachers. Thus, investigating how particular kinds of experiences for teachers at pre-service levels are connected to the character and quality of their teaching is needed if teachers are to become more effective in teaching culturally diverse students in order to produce more equitable student outcomes (Zeichner & Hoeft, 1996).

For the present study, I examined the following questions:

1. How do pre-service teachers think about teaching for diversity upon entering an undergraduate content-area reading teacher education course?

2. What growth (if any) occurs in pre-service teacher thinking about teaching for diversity during an undergraduate content-area reading teacher education course which included unmonitored field experiences with at-risk students?

3. How did the thinking and growth differ in pre-service teachers with two different instructors?

Theoretical Framework

The theoretical framework for this study is drawn from the constructivist view of learning (Artiles and McClafferty, 1998; Atherton, 2005; Bransford, Derry, Berliner, Hammerness, & Beckett, 2005). Constructivism is a set of theories about learning based on the notion that people construct new knowledge from their current knowledge, skills, and developmental levels (Atherton, 2005). Social constructivism suggests that social interaction plays a fundamental role in the development of cognition (Vygotsky, 1978). It emphasizes how thought processes mediate behavior in a participatory context. Teachers develop and transform knowledge and beliefs about teaching and learning from previous and current experiences within social contexts and according to their developmental level (Barone et al., 1996; Pajares, 1992). Teachers' conceptions about school develop from prior experiences in school (Banks et al, 2005).

Review of the Literature

Pre-service Teacher Education for Linguistic and Cultural Diversity

Teacher educators can help prepare teachers for diversity by contextualizing the social nature of learning (Haberman, 1996). Diverse students should be understood within the broader context of their lives outside and inside school (Garcia, 1996). Teachers with high expectations of students provide them with socially, culturally, and linguistically meaningful contexts for learning. Teachers must consider the relationship between the home and school and its effect on students' learning achievement. Language, culture, and values that accompany them are what children come to school knowing. Pre-service teachers need to become familiar with a responsive pedagogy by recognizing the importance of cognitive, social, and cultural dimensions of learning. They need to replace the preconceived myths about the students from lower

socioeconomic homes with high expectations for these students as competent language learners (Garcia, 1996; Ladson-Billings, 1994; Ríos, 1996).

Pre-service teachers can be guided to ask specific contextual questions such as "How do students communicate in their communities? Do students feel more comfortable with communal or individualistic approaches to learning?" They will learn to use culturally responsive approaches in meeting the needs of students and their families (LePage et al., 2005). The best teachers for diverse students do not believe that kids are kids and teaching is the same for all kids. Whether they have experienced urban education and living or have developed empathy of others' situations, dispositions of the best urban teachers manifest in the approaches they use and beliefs they have about their students. They are persistent, protective, and responsible for their students' successes at individual, personal, and bureaucratic levels. In other words, they will stand up for their students against anything or anyone who stands in the way of their success.

Multicultural Education for Pre-service Teacher Education

The multicultural education literature for teacher education suggests incorporating multicultural education into all facets of the educational enterprise (Hidalgo et al., 1996). Multicultural education is an educational reform grounded on the notion that all students (regardless of their gender, class, or cultural characteristics) should have an equal opportunity to learn in school (Banks, 2001). Multicultural education supports the values of diversity, cooperation, and a caring community for teacher education programs for cultural diversity. Ideally, teacher educators should feel collectively responsible for modeling these beliefs if they desire pre-service teachers to apply them successfully. The context of a university-wide effort to infuse multicultural education across the curriculum would build multicultural education into the curriculum in order to communicate a broad consensus about the goals and values that are desired of teachers who are prepared for cultural diversity. The development of one's own cultural identity is essential for cross-cultural understanding (Banks, 2001; King, 1991). Curriculum and instruction strategies are important for preparing pre-service teachers' dispositions and identities for cultural diversity, but that coursework and academic analysis alone are inadequate for the necessary level of dispositions needed to develop greater intercultural competence (Zeichner & Hoeft, 1996). Teacher educators can begin to increase pre-service teachers' knowledge of their own cultural positions in order to work with students who are culturally different from them.

Pre-service Teacher Dispositions

The most current empirical research about the dispositions of pre-service teachers for cultural diversity has found that most are White, female, middle class, and have limited experiences with cultures different than their own (Hollins & Guzman, 2005). Many have negative attitudes and beliefs about those who differ from themselves. Many are unwilling or feel unprepared to teach in urban schools. Hollins & Guzman's (2005) recent review of research on the preparation of teachers for diversity found that most studies were qualitative and conducted in university or field experience settings. Their review includes research studies concerned with (a) prejudice reduction, (b) equity pedagogy, (c) field experiences, and (d) preparation of pre-service teachers of color.

Prejudice reduction. Most of the studies primarily concerned with prejudice reduction report positive short-term results on the pre-service teachers' attitudes and beliefs. They used a "model or interpretive framework, introducing dissonance and discontinuity, cognitive coaching, or the use of critical text analysis" (Hollins & Guzman, 2005, p. 489). Few studies, however, were longitudinal or included follow-up investigations. The problematic methodological issues were small sample sizes; short time frames; self-report rather than direct observation or documentation; little context, participant, or findings information; and little information about fitting prejudice reduction activities into the larger picture of existing teacher education structures.

Equity pedagogy. Studies that look at preparing pre-service teachers to use equity pedagogy (i.e., when teachers use methods and materials that support the academic achievement of diverse and minority students) report mixed results. Several noted inflexibility and rigidity as problematic in pre-teachers' thinking (Hollins & Guzman, 2005). Others reported positive outcomes. These studies found that early socialization in teacher preparation and understanding of the subject matter can influence the use of equity pedagogy, but not necessarily resulting in increased academic performance of students. Methodological issues were raised by not knowing how the researcher, also the instructor in most studies, and participant relationships were handled. Small convenient sample sizes, short-term studies, inadequate description of contexts, and whether the pre-service teachers actually use what they learned once they become teachers were also limitations in the studies with positive outcomes.

Field experiences. Teacher educators and both pre-and in-service teachers agree that field experiences are the most important aspect of teacher preparation (Hollins & Guzman, 2005). A large body of research on how experienced teachers do or do not effectively teach minority students (e.g., culturally relevant pedagogy, culturally responsive teaching) has influenced teacher preparation, field coursework, and student teaching. It concentrates on pre-service teachers' perspective on their increased "awareness, understanding, and acceptance of those different from themselves" (Hollins & Guzman, 2005, p. 493).

Preparation of pre-service teachers of color. Research on the experiences of pre-service teachers of color provides some insight into the challenges they undergo in teacher preparation programs. They face financial, social, personal, and inadequate academic preparation for college. Even though various means for accommodating pre-service teachers of color have been developed (e.g., cohorts, pairing with White candidates, using insider knowledge), pre-service teachers of color still feel alienated.

Overall, the use of activities to increase understanding about diversity have shown mixed results. The barriers stem from positivistic thinking, relying on personal biographies, and a belief in one right answer. Teacher candidates of color feel more comfortable in cohorts when allowed to bring their unique knowledge to the table, and have more experience and are more understanding of inequities. However, no studies mentioned how Hispanic pre-service teachers view teaching students different from themselves. For this reason, it would be of interest to look at how population of mostly Hispanic pre-service teachers view teaching for diversity.

Method

A naturalistic qualitative research design was used to investigate how Hispanic pre-service teachers think about teaching for diversity and any growth that may have occurred during the course of the study. Naturalistic inquiry is a "design strategy for studying real-world situations as they unfold naturally with an openness to whatever emerges" (Patton, 2002, p. 40). Qualitative data in this study consisted of naturally occurring written reflections and concept maps (Patton, 2002).

Participants

A convenience sample of fifty-eight pre-service teachers participated in this study. The pre-service teachers were enrolled in two sections of a required content-area reading education course, which included field experiences with at-risk students. They attended a multicultural-designated public research university located in a large culturally diverse county. The university student population is multicultural, typical of the sample of this study. The participants' cultural backgrounds were insightful for the questions of the study (Patton, 2002). Eighty percent of this sample was female, which is typical of the pre- and in-service teacher population in our country. However, 85% of this sample was Hispanic, 10% White, and 5% African American, which is atypical for teacher populations (Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005).

Class 1 and Class 2 were distinctive in the instruction they received in two ways for this study. Participants in Class 1 were taught by a White female doctoral student who had assisted the professor, also a White female, who instructed Class 2 in two previous semesters. The doctoral student presented the same material via power point slides with small-group interactions interjected throughout each class. The small-group interactions were used to practice learning-to-learn reading strategies chosen by the professor of Class 2. The second distinction in instruction was what was requested from each class in their first session and in their weekly journals. Weekly journals were a reflection on their field experience with at-risk students. Class 1 was specifically asked to think about effective teaching for culturally diverse students during the first class and to include cultural comments in their journals while reflecting on their field experiences. Class 2 was not prompted to think about culture in class or in their journals.

Data Collection

This study used two alternative data collection strategies (i.e., concept map and written reflections on field experiences). Concept maps entitled "Effective Teaching for Culturally Diverse Students" were constructed by the 34 participants of Class 1 the first day of the course. Concept maps have been used in previous studies to assess conceptual changes in pre-service teachers' thinking and to measure how individuals organize and construct their knowledge (Morine-Dershimer et al., 1992). Artiles and McClafferty (1998) were the first researchers to use concept maps to assess the effects of multicultural education courses on pre-service teachers' thinking. The present study used concept maps to assess pre-service teachers' thinking about teaching for diversity upon entering the course.

Data were also collected from the weekly written reflections on their field teaching experiences. During the field experience, participants implemented content area reading course

material (i.e., learning-to-learn strategies) which had been discussed and practiced in a previous class. Data included any cultural comments they may have written in their journal reflections. Five hundred fifty written reflections were collected over the semester (333 from Class 1; 217 from Class 2).

Data Analysis

The data analysis was context sensitive and extrapolated patterns for adaptability in new settings (Patton, 2002). Knowledge and beliefs were defined as grouping terms in order to categorize outcomes. Use of multiple methods and perspectives, or data triangulation (i.e., written reflections, concept maps), "reflect[ed] an attempt to secure an in-depth understanding of the question of this study" (Denzin & Lincoln, 2005, p. 5). Triangulation is an alternative to validation that adds "rigor, breadth, complexity, richness, and depth" (Denzin & Lincoln, 2005, p. 5) to this study to assess the thinking (i.e. conceptual understandings) of teacher education students about teaching for diversity.

Concept maps. An inductive, exploratory data analysis approach in line with the constructivist and sociocultural viewpoints was used to examine the density of the concept maps in order to determine how participants construct their knowledge about effective teaching of culturally diverse students. The assumption was that "people's graphic representations of constructs via concept maps mirror their knowledge" (Artiles and McClafferty, 1998, p. 193). The process assessed conceptual patterns by looking at the density of individual categories, group emphases differentiation, and hierarchical organization. A qualitative category system was developed through content analysis to code the content of the maps.

Written reflections. Pre-service teachers' written reflections made across the course duration were transcribed and then coded into categories in order to emphasize patterns in their intent and ideas about teaching culturally diverse students. The assumption was that knowledge constructions develop and transform according to previous and current experiences within social contexts according to the developmental level of the learner (Barone et al., 1996). Transcribed segments were compared within and across categories (i.e., constant comparison) according to qualitative research tradition. The constructs were compared through revision of categories until satisfactory closure was achieved (Gall, Gall, & Borg, 2003).

The goal of constant comparison was to discover themes in the pre-service teacher participants' thinking about teaching for diversity from which conclusions could be made. Marshall's (1996) Multicultural Teaching Concerns Categories derived from a survey given to pre-service education majors and experienced teachers was used as a model to discern pattern emphases within the categories developed from the concept maps and reflections. The categories included concerns in four areas: (a) "Familial/Group Knowledge," or culture and background; (b) "Strategies and Techniques," or using appropriate techniques and content in the curriculum; (c) "Interpersonal Competence," or cross-cultural competence, the "impact of personal attitudes, actions, and/or beliefs on interactions with diverse student populations" (Marshall, 1996, p. 247); and (d) "School Bureaucracy," or the impact of the structure and actions of schools and personnel on multicultural education in schools.

Findings

The results of this study revealed how the participants constructed their thinking and knowledge about teaching culturally diverse students when asked (or not) to voice their thinking (e.g., make cultural comments) about teaching for diversity. Patterns of emphases in the concept maps and the written reflections are explained below. The following findings share the results for Class 1 only due to the absence of any cultural comments from Class 2. Table 1 follows with the explanations in a qualitative/quantitative summary.

Concept Maps

The concept maps in Class 1 (with 34 students) portrayed no mention of familial/group knowledge. Twenty seven maps focused only on strategies and techniques with six noting interpersonal competence once or twice. One map focused specifically on interpersonal competence. None mentioned school bureaucracy. Class 2 was not asked to make concept maps.

Written Reflections

Familial/group knowledge. Cultural comments were coded in the category of "Familial/Group Knowledge" if they reflected teachers' perceptions of the impact of ethnicity or race on experiences at school or if they implied gaps in their knowledge about students' cultural backgrounds. Fifteen comments were made about race, language, ethnicity, or socioeconomic status. The majority of these comments were simple descriptions or statements. The following quotes typify the comments in this category:

- "The student attends a predominantly black and Latino school in a low-moderate income area."
- "The high school where I teach consists of lower-to-middle class populations where approximately 50% are Hispanic, 40% are African-American, 8% are White and 2% are Asian."
- "We have students from different parts of the Caribbean and the America….Most of my students have parents who come from other countries but were born here. I also have three students who were born in the Dominican Republic."

Strategies and techniques. Cultural comments about selecting and using the most appropriate teaching materials and strategies for maximal student learning were coded into the category of "Strategies and Techniques." Two comments fit in this category, typified as students' learning styles or interests:

- "As a cultural comment I must state that the young age of the students may have played a crucial role in their lack of interest regarding [the topic of the article]"
- "My student didn't really have any cultural issues that he experienced during the lesson. Although he clearly had a preference over the different strategies, he was comfortable throughout the process."

Interpersonal competence. Five comments were coded into the "Interpersonal Competence" category. Interpersonal competence relates to what the teacher and students think of each other as it affects the ability for both to interact fairly (Marshall, 1996). The theme of the

amount of information students learned and the way they learned in five comments was exemplified in the following quote:

- "The diverse cultures between my students and I do not affect the strategies I teach them each week. Although they speak both Spanish and English, there are no barriers in teaching them or vis [*sic*] versa with my students learning and understanding the material/strategies."

School bureaucracy. The final category, "School Bureaucracy," related to issues beyond the teachers' classroom control in trying to meet the diverse students' need (Marshall, 1996). It was not mentioned in any of the written reflections from Class 1. Class 2 did not mention cultural concerns or thoughts at all in any of the written reflections.

Table 1 below displays a qualitative and quantitative summary of the participants' thinking about diversity as presented in the findings.

Table 1

Qualitative/Quantitative Summary of Patterns in Pre-service Teacher Thinking about Diversity

	Class 1 N=34		Class 2 N=24
Multicultural Teaching Concerns Categories	Concept Maps n=34	Written Reflections n=333	Written Reflections n=217
Familial/Group Knowledge	0	15	0
		Theme: Race, language, ethnicity, socioeconomic status	
Strategies and Techniques (S&T)	27 (S&T focus) 6 (IC included)	2	0
		Theme: Learning Styles and students' interests	
Interpersonal Competence (IC)	1 (totally IC)	5	0
		Theme: Amount of information students learned and the way information was learned	
School Bureaucracy	0	0	0

Note: Numerals stand for the number of time cultural comments were included in map or written reflection.

Discussion

Pre-service teachers' thinking about diversity throughout the course depicted previous frames of reference and prior knowledge based on a traditional or transmission view of learning in which the learner's role is to assimilate or regurgitate whatever the teacher presents (Atherton, 2005). The thinking about culture on the concept maps and in the reflections throughout the course remained superficial, static, and/or nonexistent. No growth or changes occurred in the participants' thinking. The content of the maps and reflections relating to cultural comments were minimal. When culture was not discussed in Class 2, no cultural comments were exhibited in the reflections. Even though the pre-service teachers participated in field experiences weekly with at-risk diverse students, they reflected only on the strategies that were being learned in a course which was situated in a traditional teacher education program (Darling-Hammond et al., 2005). When cultural comments were requested in Class 1, short statements and add-on paragraphs were the typical response. Even though this class also had weekly field experiences with at-risk diverse students, pre-service teachers would repeat their original cultural comments about race, language, or ethnicity in later reflections denoting that culture to them was a static entity. Several responses equated culture to the learning styles of their student or how their students learned the information that the pre-service teacher had given them. The overall construction of knowledge in the responses reflected a previously learned traditional view of knowledge in which the teacher believes that students learn by having information transmitted to them in order for them to regurgitate it back to the teacher.

Tools for Teacher Educators

Teacher educators can learn about how pre-service teachers' construct knowledge about teaching for diversity with the use of the concept maps and written reflections in the context of teacher education courses. The patterns can be used as a tool for developing next steps in teaching for diversity for future educators. In this study, the pre-service teachers' overall view about culture was a superficial one which indicated that the pre-service teachers have had superficial experiences related to culture. The participants' superficial view of cultural connections in the classroom can also be related to their previous or current educational experiences. The particular teacher education program in which the participants are a part of in this study is one with a traditional perspective (i.e., add-on, segregation, and one-shot courses) toward diversity. It will take more than a request as done in Class 2 for pre-service teachers to view diversity from a contextual or holistic perspective.

Culture is Static

Patterns discerned from the concept maps and reflections suggested how participants constructed their thinking about what culture means. They viewed culture as an observable item in the classroom that was static in its reality. Culture was not seen as part of a wider perspective including sociohistorical, sociopolitical, sociocultural, and socioeconomic challenges (Friere, 2000; Giroux & McLaren, 1986). Culture was believed to have little to do with how students learned, how teachers and students relate, or how schooling works overall.

If pre-service teachers were not asked to discuss culture, they did not. If they were asked to discuss culture, they did, but only superficially or because they were asked. When asked to

draw a map of their views of effective teaching for diverse students, the idea of "learning strategies and techniques" dominated, which is indicative of the teacher education program and the course focus in this study. The add-on nature of multicultural courses in their teacher education program influenced the participants' naïve or static way of looking at culture in the classroom. The pre-service teachers in this study connected culture only to the depth of their experiences and schooling. Overall, intra-group differences showed no evidence of a demonstration of connectedness in their thinking between curriculum, instruction, and contextual issues related to teaching diverse students (Lieberman, 1992; Fenstermacher, 1994).

Race and Class Issues

The statement made earlier in this paper that the 'future of U.S. teacher education will need to rethink its traditional teacher education programs in order to adequately prepare its future teachers with the attitudes and dispositions needed to work with culturally and linguistically diverse and poor students (Hollins & Guzman, 2005; Zeichner & Hoeft, 1996)' has implications for this study. Even though the majority of pre-service teachers in this study were Hispanic rather than White, their thinking about teaching for diversity was unexpectedly similar to that of our country's mostly White teaching force. Both use their previous and similar [i.e., White, middle-class, traditional] experiences and schooling to think (or not think) about teaching diverse students. White teachers in other studies and the Hispanic pre-service teachers in this study who exhibited a White, middle-class, traditional understanding of culture as static or nonexistent would both benefit from a departure in their traditional teacher education program focus to one that would help them gain and develop the dispositions and attitudes needed to work with the growing numbers of culturally and linguistically diverse and poor students who have different backgrounds from themselves. More studies about the developmental process of teacher education for diversity are needed (Artiles & McClafferty, 1998). The prevalence of the Hispanic pre-service teachers' socioeconomic backgrounds on their thinking about teaching for diversity that has been foregrounded here may have implications which apply to the developmental and social processes of pre-service teacher education about teaching for diversity. Ultimately, *class* appears to supersede *race* in this and other studies concerned with teaching for diversity.

Limitations of the Study

Use of the concept maps as a post-evaluation of growth or the developmental process of pre-service teachers' thinking about teaching for diversity would have added another dimension to the pre-service teachers' thinking about diversity (Hammerness et al., 2005). Inter-rater scorers of the data would have added more reliability to this study (Patton, 2002). An in-depth description of the teacher education program, the teacher educators, and the participants in this study would have contextualized the study within other teacher education research. This would increase the possibility of linking individual studies on teacher preparation for diversity into multi-site research programs (Wilson, Floden, & Ferrini-Mundy (2001).

Implications for Future Research

Cochran-Smith's (2005) analysis of the new teacher education as social, ideological, rhetorical, and political practice from a multidisciplinary framework, interrelating research, policy, and practice apply to this and other studies concerning teacher education for diversity. In her analysis, the new teacher education emerges with the reauthorization of the Higher Education Act (HEA) of 1998, wherein Title II mandated the "reporting and accountability requirements for teacher education …. [The trend for the new teacher education is that it is being] constructed as a public policy problem, based on research and evidence, and driven by outcomes" (Cochran-Smith, 2005, p. 4). Future studies need to provide an impetus for collaboration among researchers to increase funding, infrastructure, and support for longitudinal research efforts to integrate issues of diversity with the rest of teacher education in light of the new education rather than marginalize them as separate or add-on research projects and courses (Cochran-Smith, 2005; Hollins & Guzman, 2005; King, 1991; Ladson-Billings & Tate, 2004).

Currently, universities report various stages of teacher preparation for diversity and mixed results in their programs. Little research has been done to relate teacher preparation for diversity programs and students' learning outcomes. "We need research that examines the links among teacher preparation for diversity, what teacher candidates learn form this preparation, how this affects their professional practices in schools, and what the impact is on their pupils' learning" (Hollins & Guzman, 2005, p. 512). The research today still needs to go beyond changing attitudes on self-report scales in the short-term (Grant & Secada, 1990; Hollins & Guzman, 2005). Research needs to examine the impact of teacher expectations on student learning. Outcomes are missing from the literature:

> What we need is a longitudinal study that tracks teachers from initial preparation to their early career experiences, focusing on classroom performance and pupils' learning as well as studies that begin with successful teaching performance, as indicated by pupils' learning, and then tracks back to teacher-learning experiences and varying modes of teacher preparation….we should start with good teaching, and ask research questions backwards to teacher preparation. We know a great deal about effective teaching practices for diverse students, but not much about how teachers who are effective with diverse students acquired the skills, knowledge, and dispositions needed. Examining the practices and teacher preparation history of effective teachers could provide insights into what candidates need to know. (Hollins & Guzman, 2005, p. 512)

Future studies need to take into account the social and cultural contexts of schools and that are informed by local meanings. Courses should be designed to link teacher preparation and educational outcomes but avoid reductionist studies of single factors (Cochran-Smith, 2005). Also well-designed urban field experiences contextualized within teacher education programs with clearly stated purposes, theoretical frameworks, and carefully thought out practices and procedures may provide insight into the developmental processes that candidates go through or use in learning to teach. The social constructivist learning theory applies to pre-service teachers as well as their students (Lee, 2005). In other words, courses need to be planned with what we know about learning so that pre-service teachers can incorporate what they are learning in theory into their practices (i.e., praxis) as they are happening (Freire, 2000; Banks et al., 2005).

Subsequent research could also focus on the long-term effects of more intense courses from a developmental perspective with teachers viewed as adult learners (Artiles & McClafferty, 1998). In future studies, reading accounts or having direct contact with diverse students,

providing [neglected aspects of] cultural knowledge, and learning about cases of successful teaching with culturally and linguistically diverse students are other strategies for raising the low levels of expectations pre-service teachers hold for some students (Ladson-Billings, 1994; Zeichner & Hoeft, 1996). Pre-service students could be provided with opportunities to incorporate home and community culture into the classroom, which would allow a contextual understanding of students' cultural assets for designing learning environments (Lee, 2005; Zeichner & Hoeft, 1996).

In effect, the pre-service teachers need to become cultural researchers or workers (Delpit, 1995; Freire, 2000). Cultural workers have a greater understanding of their own cultural identity. Understanding one's cultural identity works with teachers' praxis when involved in cross-cultural opportunities in schools and community field experiences. Future teacher education field experiences in partnership with schools who have professed missions which include teacher education with a special commitment to teacher development would be beneficial for both future teachers and students. Future research studies need to report the needs and perspectives of students and teachers of color and those who are White in order to meet the particular needs of diverse students and pre-service teachers (Zeichner & Hoeft, 1996). Overall, future research needs longitudinal studies which study how long-term changes are made in pre-service teachers' dispositions for cultural diversity from instructional, curricular, and field experiences in relation to student outcomes.

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Of Medicine and Rocket Science: Metaphors that Shape the Field of Literacy Education

Eric J. Paulson

In this article, I focus on the potential for metaphors to reflect and construct our worldviews, especially those worldviews that pertain to literacy education. Ubiquitous in language, art, architecture, literature, advertisements, symbols, myths, and more (Kovecses, 2002), metaphors have the power to shape the way we define our realities and arguably form the foundation of our conceptual system (Lakoff & Johnson, 1980). Evident in the way we talk and the way we think, metaphors play an important role in understanding and organizing information in general, and this role is also evident in theoretical conceptualizations of academic fields. For example, dealing specifically with theories of intelligence, Sternberg (1990) argues that an appreciation of the metaphors that underlie theory can help move a field forward, and conversely that it is difficult to understand the interrelationships of different theories "unless one understands past and present theories in terms of their underlying metaphors" (p. 5). Thus, one purpose of this article is to address the metaphors that exist in the field of literacy education with a view toward understanding the role of metaphor in divergent realizations of theory-driven practice.

The article first provides core information central to understanding metaphor, including a description of its links to analogical processing and its use as a frame for generating worldviews. Metaphors germane to the field of literacy are then explored; specifically, the metaphor that provided the foundation for the work of an influential literacy group is critically examined and competing metaphors are introduced. Finally, a survey of literacy educators' responses to each metaphor are discussed in terms of dissonance, accordance, and implications for the field.

Metaphor and Analogical Processing

What do metaphors have to do with everyday life? If we think of metaphor use as only involving an interpretation of what Shakespeare meant when he wrote "life's but a walking shadow," then metaphors probably seem somewhat removed from our cognitive lives on a daily basis. But in fact metaphors shape our daily lives more than we realize.

Basic descriptions of metaphor often include any kind of non-literal, figurative language where one object or idea is described in terms of another, as Shakespeare does in the quotation above. That type of metaphor is common in literature when authors seek to make a description of an object more compelling through its comparison to something else; John Donne's "no man is an island," for example, illustrates the idea that humans are social beings. However, metaphors are also employed outside of literary venues for purposes of cognitive processing in general, and it is this type and use of metaphor that I focus on here. Specifically, metaphors that are understood through an *analogical process* are of interest in the present article. In the next section, the relationship between metaphor and analogy is described.

Metaphor and Analogical Processes

A core part of how we understand some types of metaphor is through an analogical process. Here, analogy is defined and described, followed by a description of its role in metaphor usage and understanding.

Definition of analogy. Analogies are more than the "A is to B as C is to D" part of a standardized test students endure; a common thread running through various definitions of analogy would include the identification of partial similarities between different objects or situations that support further inferences (Gentner, 1998). While the purpose, quality, type (e.g., attribute, relational, and system, see Holyoak & Thagard, 1995) and use of analogies vary greatly, in general, analogies are used to explain new concepts, to solve problems, and to understand new domains (Gentner, 1998). For example, in seeking to understand the acoustic properties of ancient Greek amphitheaters, the Roman architect Vitruvius constructed an analogy that included the behavior of water and the apparent behavior of sound. Just like waves in a pool of water will move outward until striking an object in the water and bouncing back, so too will sound move outward from the source, bouncing off of physical structures in its path (Holyoak & Thagard, 1995). The analogy between something known—properties of water—to something unknown—properties of sound—allows a greater understanding of the unknown. Thus, the analogical process is one of mapping similarities between a source analogue and a target analogue in order to better understand the latter (Holyoak & Thagard, 1997).

Analogical processes and general cognition. Analogical processes are commonly used to make sense of new information in general. Some scholars have argued that a great many aspects of thinking are analogical in nature (Gentner, 1998) and that thinking analogically is a core feature of human cognition (Kurtz, Miao, & Gentner, 2001). Similarly, Rene Descartes argued that "all knowledge whatsoever, other than that which consists in the simple and naked intuition of single independent objects, is a matter of the comparison of two things or more, with each other" (cited in Leary, 1990, p.39), clearly a description of an analogical process. More recently, and more explicitly, it has been asserted that "a concept is a package of analogies" (Hofstader, 2001, p. 507). Indeed, analogy use may well be a naturally occurring process—one that does not need to be consciously or deliberately taught—since its use is evident by even our youngest thinkers. Infants are able to use basic analogical processes to figure out their world, and by the time children are 5 or 6 years old, they are able to use complex analogies for many purposes (Holyoak & Thagard, 1995). Analogical processes are thus natural and ubiquitous parts of our cognitive lives. This is directly related to the comprehension of a given metaphor, as I discuss in the next section.

Metaphor is comparable to analogy. When the purpose of a metaphor is to understand one thing through relating it to another, and the system of relations from the source holds in the target, then metaphor can be considered comparable to analogy (Gentner, Bowdle, Wolff, & Boronat, 2001). Of course, not all metaphors are understood through an analogical process; for example, what are sometimes called "dead metaphors" are metaphors like "the arm of a chair" or "the temperature is rising" that have been in use for so long that they are responded to literally instead of figuratively (see Deutscher, 2005). However, many metaphors are understood through the analogical process of mapping aspects of the source onto the target, as described above. For example, the popular quotation "Education is not the filling of a pail, but the lighting of a fire," attributed to William Butler Yeats, is a metaphorical re-consideration of the nature of education. The quotation includes two competing metaphors that are processed analogically; the first of

these is a comparison of the act of filling a pail with that of teaching, and what that implies about who the students are, what the teacher's role is, and so on. This is contrasted with the second metaphor, the act of lighting a fire and that of teaching, which implies a different role for the teacher and a different conceptualization of learning. Understanding the metaphor in this way thus entails an analogical process, where aspects related to the source (lighting a fire) are mapped onto the target (education) in order to learn something about the target. (Of course, what makes the quotation powerful is the comparison between the two competing metaphors.) In short, I consider novel metaphors as being processed analogically, an approach similar to Kovecses' (2002, 2005) and Lakoff's (Lakoff & Johnson, 1980) definition in cognitive linguistics of conceptual metaphors, where one conceptual domain is used to understand a second conceptual domain.

  Metaphors understood through analogical processes. Linguistic metaphors are considered here as encapsulating the results of these analogical processes. This is a recursive relationship where metaphor is "constituted by a variety of parts, aspects, or components that interact with each other," and these aspects include source domains, target domains, metaphorical linguistic expressions, and mappings (Kovecses, 2005, p. 5). In this way, the metaphor both results in, and is a result of, sets of implicit and/or explicit analogies. These fundamental ties to general cognition make metaphor a powerful conceptual influence, as is discussed in the following section.

<div align="center">Metaphor as a Frame</div>

  Because of the ubiquitous nature of analogical processes, and because metaphor can be considered the linguistic substantiation of an analogical process, metaphors are commonly used as frames for how we perceive the world around us: as a lens through which we make sense of, and construct, our daily realities. This is especially evident in dialogue on a national scale where metaphors are often used both implicitly and explicitly for the purposes of shaping and understanding issues important to large groups of people. Lakoff (2004) provides a powerful argument that the metaphors a speaker uses act as frames that position listeners to accept the speaker's world view. He focuses on politicians' choices of words in prepared speeches, like the use of *tax relief* when discussing changes in income tax rates: "When the word *tax* is added to *relief*, the result is a metaphor: Taxation is an affliction. And the person who takes it away is a hero, and anyone who tries to stop him is a bad guy" (p. 4). Of course, choosing words to frame a debate is not limited to politicians; it is an everyday occurrence with all of us, even if it is often nondeliberate and the analogies are implicit, rather than explicit. And just as there are two sides to every story, there are often two metaphors (or more) for every action, situation, and approach; the metaphor used both reflects and shapes the user's reality. An example of competing metaphors for competing worldviews follows in the next section.

 Metaphor as a Frame for Competing Worldviews
  One example of a large national event that has competing metaphors—and thus competing worldviews on the event itself—is the Iraq War. In August, 2005, two competing metaphors were brought to the forefront within days of each other, illustrating—and shaping—a difference of opinion about the war.

Metaphor #1. In an episode of *The McLaughlin Group*, aired August 26, 2005, John McLaughlin referred to a recently viewed slogan when he asked the following question:

> Issue four: Translate it as Vietnam. In the Cindy Sheehan demonstration near President Bush's Crawford ranch, a sign was held up which said, quote, "`Iraq' is Arabic for `Vietnam,'" unquote. Question: Is Iraq Vietnam?" (Federal News Service, 2005, para 267)

The sign being referred to reads "'Iraq' is Arabic for 'Vietnam,'" a metaphor that references an explicit analogy relating the Iraq War to the Vietnam War. This comparison triggers a frame that invokes negative images of the conflict, possibly including (but not limited to) an understanding of the Vietnam War as an unjust, unwinnable quagmire, and transferring that understanding to the Iraq War. This is the overall frame, generated by implicit analogical processing. Subsequent to his question above, McLaughlin then delineated the specific analogical similarities between the two wars:

> Iraq is a noble cause; Iraq is also a quagmire. The insurgency is resilient, as were the Viet Cong. The insurgency blends in with the people, as do both of the enemy forces. The insurgents draw strength, and they find safe haven and even now are importing munitions across the borders, as did the Viet Cong. (Federal News Service, 2005, para 270)

Thus the slogan carries with it implicit analogical connections between the two wars that evoke a certain frame through which an understanding of the Iraq War is constructed. In a similar way, a competing metaphor, below, shapes perspective on the Iraq War:

Metaphor #2. In a speech on August 30, 2005, President George W. Bush compared the Iraq War to World War II (WWII), as the following news story relates:

> Reaching back into history, Bush repeatedly cited Roosevelt's steadfastness as the model for today's conflict, comparing the Japanese sneak assault on Pearl Harbor in 1941 to the al Qaeda terrorist attacks on New York and Washington on Sept. 11, 2001. Much as Roosevelt fought pre-Pearl Harbor isolationism, Bush urged against a return to what he called the "pre-9/11 mindset of isolation and retreat." (Baker & White, 2005, para 4)

World War II invokes a different frame than that of the Vietnam War since many view WWII as a just war, bravely fought and convincingly won. Connecting the Iraq War to WWII thus invokes a frame of a noble war of necessity. As McLaughlin did above, Bush makes explicit analogical connections between the Iraq War and another war in order to shape the listener's perception and worldview of that event.

The Power of Metaphor

In short, metaphors and analogical processing are both ubiquitous and powerful. Most readers of this article will identify with either the "Iraq=Vietnam" or the "Iraq=WWII" frame, but few if any will view both metaphors as having an equal truth value. This is the nature of competing metaphors. This raises another issue: if there is a powerful metaphor that has *no* competing metaphor, discourse about issues connected to that metaphor necessarily take place within the frame of that metaphor, a point that Lakoff (2004; Lakoff & Johnson, 1980) makes convincingly. In such cases that have only one metaphorical frame, the perspective of those engaged in understanding the issue is usually a foregone conclusion; that is, the analogically driven frame is so powerful that it evokes only one commonly accepted understanding of the situation. It follows, then, that a metaphor leading to a frame that is not worthwhile requires competing metaphors. One purpose of this article is to address the metaphors that exist in the field of literacy education, particularly where there are metaphors that require critical examination. The perspective taken here is this: if analogical processing is indeed a core part of

our cognitive processes (Hofstader, 2001) that produces metaphorical frames which both reflect and construct our worldview, it is incumbent upon educators to explore the impact and role of metaphor in shaping the field of literacy.

A Powerful Metaphor in the Field of Literacy

Like their role in shaping our understanding of our everyday lives in general, metaphors play a role in how we frame the field of literacy. That is, metaphors provide a lens through which we understand different aspects of our field: theory, research, and practice are all affected by the implicit or explicit metaphors that we construct. One such metaphor influential in the field of literacy education is explored below.

The Guiding Metaphor of the National Reading Panel
In this section, I trace the development of a current, very powerful, view of literacy that has culminated in the Reading First Initiative of the educational law No Child Left Behind. I believe this current, federally mandated, literacy policy (including materials, assessment, and practice) is based on an extremely powerful metaphor. This metaphor, which I'll term the *Medical Model* of literacy, is not without competing metaphors, as latter parts of this article will address; however, the *Medical Model* currently holds sway. Its impact on the field of literacy is traced here—an impact that is not conducive to theoretically and pedagogically sound literacy research and practice.

The origin of the National Reading Panel. Some background: In 1997, Congress charged the National Institute for Child Health and Human Development (NICHD) with forming a panel to investigate the research base of reading research and how to teach reading. This panel became the National Reading Panel (NRP), which issued its report on reading research and practice in 1999 (NICHD, 2004a). So influential was this report that it formed the basis for the portion of the No Child Left Behind (NCLB) law that deals with reading, the Reading First Initiative (NCLB, 2001). To the casual observer, it might seem that such a powerful report might enjoy support from a majority of literacy professionals, but that is not the case. Several books and articles have since appeared that criticize the panel, its approach, and its findings (e.g., Allington, 2002; Coles, 2003; Garan, 2002). The vast majority of these criticisms are well-founded: the report of the NRP has a number of very serious flaws. These flaws resulted in conclusions that reflected the panel's view that reading is a process composed of many discrete subprocesses that can be measured and instructed individually and detached from other aspects of reading; that is, the report appears to promote a reductionist view of reading.

The purpose of this article is not to catalog those flaws—the reader is encouraged to read the above references for that purpose—but rather to investigate a rarely addressed cause of those flaws: that of the panel operating under what I feel is a wholly inappropriate metaphor during its tenure.

The core metaphor. It is my view that the principal reason for the outcome of the NRP report lies in the metaphor implicitly—and, at times, explicitly—guiding the panel. This is the *Medical Model* metaphor, where the lay understanding of medical research is that of testing cures of diseases: a sample of people who all have disease X will be split into random groups to

receive treatment. One group will get no treatment, one group will get a sugar pill, and one group will get the new miracle drug. The outcome is usually seen as being rock-solid; that is, the miracle drug either works or it does not. (Of course, real medical research is much more subtle, complicated, complex, sophisticated—and full of grey areas—than this lay understanding, but it is this lay understanding that forms the basis for the metaphor in many peoples' minds.) Below, I briefly trace the genesis of the methodological approach of the panel and link it to the *Medical Model*.

Methodological standards of the NRP. One of the first actions of the NRP was to "develop and adopt a set of rigorous research methodological standards" (NICHD, 2004b, para. 1). The methodology is important because it forms the basis for how the panel views what is useful and important in reading research approaches. The NRP provided the basis for its methodology in the addendum to its report, which reads in part:

> The evidence-based methodological standards adopted by the Panel are essentially those normally used in research studies of the efficacy of interventions in psychological and medical research. These include behaviorally based interventions, medications, or medical procedures proposed for use in the fostering of robust health and psychological development and the prevention or treatment of disease. It is the view of the Panel that the efficacy of materials and methodologies used in the teaching of reading and in the prevention or treatment of reading disabilities should be tested no less rigorously. However, such standards have not been universally accepted or used in reading education research. (NICHD, 2004c, para 1)

The methodological standards adopted by the NRP for the examination of the body of literacy education research thus appear to be explicitly based on a medical research model.

The medical model and research valued. Using medical research as a guide created de facto parameters for the types of research that would be considered, and the NRP delineated those parameters as considering research that "used an experimental or quasi-experimental design with a control group or a multiple-baseline method" (NICHD, 2004b, para 4). Essentially, this means quantitative research designs. Case studies, thick description, correlative studies, and qualitative research in general were not considered for review by the panel for this reason. One unfortunate byproduct of this approach is that a vast amount of quality research was disregarded, resulting in very few studies actually being reviewed by the panel; although it is commonly stated that the NRP reviewed over 100,000 studies en route to writing its report (e.g., Department of Education, 2005), in reality the panel reviewed less than 1% of that number (see Coles, 2001). This dearth of studies actually reviewed by the panel is in itself problematic.

Of course, research quality is not defined by the type of research methodology it follows; there is good quantitative research and good qualitative research, just like there is bad quantitative research and bad qualitative research, and everything in between. However, like qualitative research *lends itself* to thick description of multiple-variable educational situations with an emphasis on context, quantitative research *lends itself* to single-variable, cause-effect, narrowly focused research designs. (These are only generalizations, of course; hence the *lends itself* caveat. The point is that one is more apt to find certain research designs associated with certain approaches to research, and this should not be interpreted as implying that one method of research is inherently better in all contexts than another.) It may not be surprising that, based on an approach that valued the review of quantitative, experimental research over qualitative research, studies focused on testing easily reduced segments of language would be foregrounded.

That is, an experiment on phonemic awareness training is more apt to fit into an experimental design than a study on the development of a child's uses of literacy at home and school over time. Thus, by choosing the methodology by which they would review studies, the panel essentially mandated what kind of results would show up in the final analysis. My contention is that this methodology was driven by the *Medical Model* metaphor.

Classroom Effect of the Medical Model Metaphor
        Note also that this is not simply an ivory tower, academic argument. The NCLB law makes specific reference to the NRP report when it states that "the Reading First initiative builds upon these findings [the NRP report] by investing in scientifically-based reading instruction programs in the early grades" (NCLB, 2001, para 4). This is not solely at the district or school level, either. In the "Frequently Asked Questions" part of the NCLB website, it is noted that "Reading First specifies that teachers' classroom instructional decisions must be informed by scientifically based reading research" (Department of Education, 2004, #7, para 3). Clearly, there is a discernable attempt to align individual classroom teachers' instructional decisions with the *Medical Model*.

        Not coincidentally, the *Medical Model* approach adopted by the NRP is reflected in larger, federal-level goals for education in general:

> Unlike medicine, agriculture and industrial production, the field of education operates largely on the basis of ideology and professional consensus. As such, it is subject to fads and is incapable of the cumulative progress that follows from the application of the scientific method and from the systematic collection and use of objective information in policy making. We will change education to make it an evidence-based field. (Department of Education, 2002, p. 51)

That is, the *Medical Model* metaphor, adopted at the highest levels of government educational oversight, is driving educational research "reform," and this affects educators at all levels, in all disciplines within education. Put quite simply: the *Medical Model* metaphor is powerful and there is an unmistakable need for metaphors that compete with the view of literacy theory, research, and instruction inherent in that metaphor.

Competing Literacy Metaphors

Competing Metaphors
        As an exploration of some of the current metaphors that guide our views on literacy research and practice, during the keynote at the American Reading Forum attendees had the opportunity to participate in a structured response session to eight metaphors that are currently active in the field of literacy. For each one, participants provided a Likert-type score from 1-10, with the higher the score indicating the more that metaphor reflected one's own beliefs and views about literacy. Each metaphor was also scored using a scale based on the popular "What's Hot/What's Not" system (Cassidy, Brozo, & Cassidy, 2000) featured regularly in the International Reading Association's newspaper, *Reading Today* (used here with the permission of Jack Cassidy). For each metaphor, respondents could rate the metaphor as being "Hot" or "Not Hot"—that is, being influential in the field or not being influential in the field at this time. They then rated that same metaphor in terms of "Should Be Hot" and "Should Not Be Hot"—whether the metaphor should be influential or should not be influential, in their opinion. Each metaphor had a brief description of the metaphor and a quotation from an educator who works within that frame. The metaphors, and the information given the conference attendees, follow:

Metaphor 1: <u>The Medical Model</u>
Brief Description: Casts literacy issues as "diseases" in need of a "cure." Medicine-based experimental (control group plus intervention group) model of research is the gold standard.
Quote: "The evidence-based methodological standards adopted by the Panel are essentially those normally used in research studies of the efficacy of interventions in psychological and medical research. These include behaviorally based interventions, medications, or medical procedures proposed for use in the fostering of robust health and psychological development and the prevention or treatment of disease. It is the view of the Panel that the efficacy of materials and methodologies used in the teaching of reading and in the prevention or treatment of reading disabilities should be tested no less rigorously. However, such standards have not been universally accepted or used in reading education research" (NICHD, 2004c, para 1).

Metaphor 2: <u>Reading is Rocket Science</u>
Brief Description: This metaphor stresses the complexity of the reading process and the resultant high degree of training needed by reading teachers; there is usually an emphasis on educators needing to be experts in linguistic aspects of the text.
Quote: "For best results, the teacher must instruct most students directly, systematically, and explicitly to decipher words in print, all the while keeping in mind the ultimate purpose of reading, which is to learn, enjoy, and understand (AFT, 1999, p. 11). To appreciate why reading is one of psychology's more mysterious phenomena, we must consider the nature of the linguistic communication that reading requires. Skilled reading happens too fast and is too automatic to detect its underlying processes through simple introspection. We read, but we cannot watch how our minds make sense out of print. The linkage of sounds and symbols occurs rapidly and unconsciously. The linguistic units that compose words, the single speech sounds (phonemes), syllables, and meaningful parts (morphemes), are automatically matched with writing symbols so that attention is available for comprehension." (AFT, 1999, p.12)

Metaphor 3: <u>Balanced Reading Instruction</u>
Brief Description: This metaphor strikes a midway point between two extremes and its educational usage is similar to its usage in fields like nutrition—balanced diet—where too much of one thing is bad for you.
Quote: "The balanced reading approach has been celebrated for offering an alternative to the extremes of pure phonics or whole language; for providing an effective combination of instructional approaches; and for accommodating various learning styles. Balanced reading instruction usually means a combination of whole language and phonics approaches" (Stoicheva, 1999, para 2).

Metaphor 4: <u>Back-to-Basics Movement</u>
Brief Description: Idea of a "Golden Age" in education where kids were taught what was needed and taught it in a way that resulted in them learning material without any nonsense.   A return to "old-fashioned" teaching methods.
Quote: "The term 'basics' means different things to different people. It's used to describe

everything from calculator-free classes to the arrangement of classroom desks in straight rows for lecture-style teaching. But for Vukmir and her cohorts, basics means the use of phonics workbooks to teach reading and of classroom drills to teach addition, subtraction and multiplication tables" (Baily, 1997, para 3).

Metaphor 5: Children of the Code
Brief Description: This is the name of a large project which involves interviews with around 80 scientists, psychologists, and educators with an interest in reading. The viewpoint of the project—thus its name—is that the writing system is a code and children have to learn how to break the code, an unnatural act.
Quote: "Reading is not in their [children's] nature. Their lives are being shaped by how well their brains are able to develop these machine-like, code-processing abilities" (Boulton, 2003, para 25). "Reading is difficult for several reasons: One is that it's a code and the code is not transparent.… A second problem is that our brains are not really set up to deal with this code. It is not language…. Third problem is instructional confusion... teachers who don't understand what the code really is or how it needs to be conveyed." (Whitehurst, 2005, para 2-4).

Metaphor 6: The Literacy Club
Brief Description: This metaphor conveys the view that rather than mastering a set of skills, reading involves entrance into a social community of readers. This is an indirect learning of how reading and writing work by virtue of seeing, and being part of, authentic literacy practices in the home, school, and other environments.
Quote: "There are no kits of materials or systematic exercises for teaching children how the world uses written language. They learn—usually without anyone being aware that they are learning—by participating in literate activities with people who use written language. It can all be summed up in a metaphor: Children learn about reading and writing by "joining the literacy club." They are given demonstrations of what written language can be used for, and they receive collaboration when they become interested in using written language themselves….Children in the literacy club have opportunities to see what written language can do, they are encouraged and helped to do those things themselves, and they are not at risk of exclusion if they make mistakes or display a passing lack of interest. They learn to be like the other members of the club" (Smith, 1994, pp. 217-218).

Metaphor 7: Reading is Word Recognition
Brief Description: The perspective implied by word recognition models/metaphors of reading is that of primacy of textual sources, specifically at the unit of the word, as informative aspects of the reading process. While reader variables (background knowledge, schema, and so on) play a role, it is the reader's ability to rapidly and automatically decode words that is of primary importance in reading.
Quote: "The letters and words of the text are the basic data of reading. For skillful adult readers, meaningful text, regardless of its ease or difficulty, is read through what is essentially a left to right, line by line, word by word process. In general, skillful readers visually process virtually each individual letter of every word they read, translating print to speech as they go. They do so whether they are reading isolated words or meaningful

connected text. They do so regardless of the semantic, syntactic, or orthographic predictability of what they are reading" (Adams & Bruck, 1995, pp. 11-12).

Metaphor 8: <u>Reading is Meaning Construction</u>
Brief Description: A meaning-construction perspective is one that provides for multiple routes to understanding written text with a near-infinite variety of meanings possible. Meaning construction characterizes the reading process as involving many text-based cues that can interact with a variety of reading strategies in a variety of ways as needed by a reader in a given reading situation.
*Quote*: "Texts are constructed by authors to be comprehended by readers. The meaning is in the author and the reader. The text has a potential to evoke meaning but has no meaning in itself; meaning is not a characteristic of texts. This does not mean the characteristics of the text are unimportant or that either writer or reader are independent of them. How well the writer constructs the texts and how well the reader reconstructs it and constructs meaning will influence comprehension. But meaning does not pass between writer and reader. It is represented by a writer in a text and constructed from a text by a reader. Characteristics of writer, text, and reader will all influence the resultant meaning" (Goodman, 1994, p 1103).

A total of 51 attendees completed and returned the survey sheet that, as described previously, asked them to rate each of the above metaphors on a scale of 1-10 (with 1 being "I don't agree with the view of this metaphor at all" and 10 being "I completely agree with the view of this metaphor") and to judge whether each metaphor was "hot" or "not hot" currently, and whether each metaphor "should be hot" or "should not be hot."

Agreement with Metaphor
　　　　Chart 1 illustrates the extent to which respondents agreed with the view of literacy espoused by each metaphor, through the Likert-type scale from 1-10:

Figure 1. Agreement with Metaphor
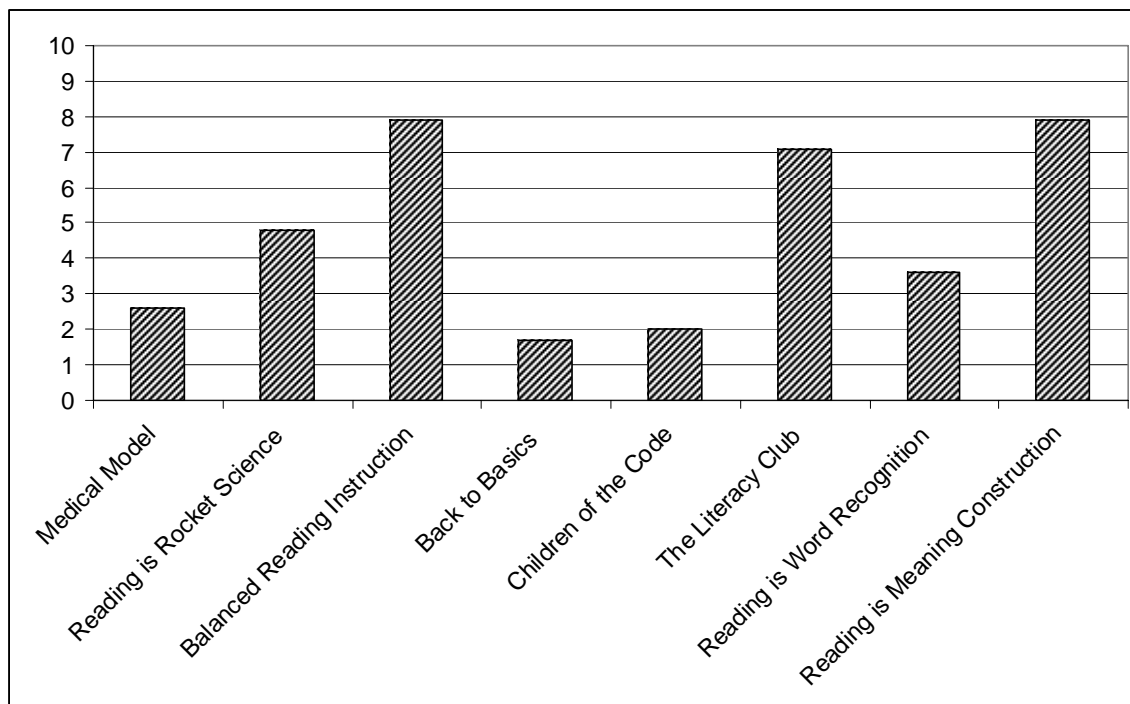
Respondents rated five of the metaphors under the mid-point (5 on the 10-point scale): *Medical Model*, *Reading is Rocket Science, Back to Basics*, *Children of the Code*, and *Reading is Word Recognition*. Clearly, the view of literacy inherent in these five metaphors is not acceptable to these educators. *Reading is Rocket Science* scored just under the midpoint, and the ambivalence surrounding this metaphor is reflected in Table 1, below, as well. In contrast to those metaphors scoring under the midpoint, three of the metaphors received average scores between 7 and 8 on the scale: *Balanced Reading Instruction*, *The Literacy Club*, and *Reading is Meaning Construction*. There is an internal consistency to these results, as a review of the descriptions of each of the metaphors in the previous section demonstrates. In terms of literacy theory and pedagogical approach, the metaphors that were generally given low scores are in direct competition with the metaphors that were given high scores. In some cases—*Children of the Code* vs. *The Literacy Club*, for example—the metaphors may actually represent mutually exclusive understandings of how reading works and how reading is learned.

Which Metaphors Wield Power, and Which Should Wield Power

The Likert-scale responses to the metaphors above reveal only part of the issue of influence within the field of literacy. It is also necessary to examine which metaphors—whether espousing perspectives we agree with or not—wield power within the field. In addition, it is important to consider which metaphors *should* have more influence. Using Cassidy's (Cassidy, Brozo, & Cassidy, 2000) "what's hot/what's not" approach described previously, respondents were thus asked to think about which metaphors are currently powerful, and which are not; additionally, respondents considered which metaphors should be powerful and which should not be. The results are illustrated in Table 1, below:

Table 1
Currency of Literacy Metaphors

Metaphor	Responses	Hot	Not Hot	Should be Hot	Should Not be Hot
The Medical Model	88% said it was *hot* and 88% said it *should not be hot*.	●			●
Reading is Rocket Science	67% said it was *hot* and 55% said it *should be hot*.	●		●	
Balanced Reading Instruction	58% said it was *hot* and 94% said it *should be hot*.	●		●	
Back to Basics Movement	66% said it was *not hot* and 94% said it *should not be hot*.		●		●
Children of the Code	81% said it was *not hot* and 88% said it *should not be hot*.		●		●
The Literacy Club	76% said it was *not hot* and 69% said it *should be hot*.		●	●	
Reading is Word Recognition	76% said it was *hot* and 68% said it *should not be hot*.	●			●
Reading is Meaning Construction	61% said it was *not hot* and 98% said it *should be hot*.		●	●	

Dissonance

These results suggest a certain amount of dissonance among and within respondents where half of the analogies are considered: where what was considered "hot" was also considered "should not be hot." That is, some of the same trends that exert power in our field, respondents believe should not exert power, and vice-versa. The *Medical Model* and *Reading is Word Recognition* are two metaphors that this group saw as having power currently that should not have power. Similarly, *The Literacy Club* and *Reading is Meaning Construction* were both viewed as not being in favor in the field, but should be. Interestingly, those two pairings could be considered in direct contrast to each other on a spectrum of views of reading: they represent competing worldviews of literacy.

Accordance

In contrast to the dissonance of the above four metaphors, the remaining four show a degree of accordance: that powerful perspectives on the field are deserving of that power, and vice versa. *Balanced Reading Instruction* is viewed as an influential metaphor that is deserving of that influence. Similarly, the *Back to Basics* and *Children of the Code* metaphors were both rated as being out of favor and needing to stay out of favor. There could be a case made for accordance with the metaphor *Reading is Rocket Science*, since there were majorities for both "hot" and "should be hot" on this metaphor; however, *Reading is Rocket Science* tilted only slightly over 50% on the "should be hot" item so there may be dissonance there as well.

The "Hot" Medical Model

Overall, the metaphor that scored the highest on the "is it hot" item was the *Medical Model*. This reflects my own analysis of the influence of that metaphor as measured through the National Reading Panel report and subsequent influence on reading legislation, as I described above. This metaphor also tied with the strongest feelings for the "should not be hot" item; this,

too, reflects my own view that this metaphor is one that is ultimately damaging to the field of literacy and those it serves.

Conclusion: The Need for Competing Metaphors

The way we educators think about our profession—at all levels, from theory to practice—is reflected in the language we use. This is not a one-way street: the language we use in turn guides and shapes our understanding of our profession. We use analogical language when discussing our field and pedagogical practices, and metaphors shape our educational beliefs (see Cortazzi & Jin, 1999; de Guerrero & Villamil, 2002). How we characterize our field is extremely important: it impacts the perspective we hold, the theory we understand, and the pedagogy we implement.

At the beginning of this article, I used an example of a metaphor: "Education is not the filling of a pail, but the lighting of a fire." The message of this analogical pairing probably did not raise any eyebrows; the author makes a generally agreed-upon point that transmission models of education should take a back seat to models that emphasize student involvement and motivation. My hope is that if I had altered that metaphor to instead read "Education is not the filling of a pail, *but the injecting of a shot*," that the cognitive dissonance there would have set off alarm bells. Yet, that is exactly the analogy that the *Medical Model* emphasizes. It is time for us to construct and promote metaphors that compete with the *Medical Model* and to present literacy education in a way that reflects our evidence-based, theoretically sound perspectives on literacy theory, research, and practice. Our alarm bells should be ringing; let's heed their call.

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