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**Textbook Aliteracy in Teacher Education:
Information Everywhere, But How Much Do They Read?**

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Abstract

This article explores the problem of textbook aliteracy, i.e. the failure to read assigned texts despite the ability to do so. Constructivism is its theoretical frame. Teacher education students at a medium-sized university in the Southern Appalachian Mountains were surveyed on their textbook reading practices. Ninety percent of the 116 students completing the survey reported studying instructors' power points in preference to completing assigned readings, at least some of the time. All were readers, though a majority (68%) reported at least some difficulty reading assigned texts. Often, they appeared to be avoiding the challenges posed by demanding text. The authors undertook various strategies to compel and encourage precise reading of informational text, with mixed results.

Textbook Aliteracy in Teacher Education: Information Everywhere, But How Much Do They Read?

Students are expected to enter university with considerable reading proficiency and are presumed capable of handling complex texts in their majors after two years of general coursework. Recently, however, we began to question how well our teacher education students read the texts we assigned them, and we suspected they might be approaching their textbooks with strategies more suited to Internet and SMS technologies. At times, we questioned whether they were reading at all. Two of us (Gann & Sharp) are teacher educators at an open access university in the Southern Mountains. We are joined in this report by McIlquham, a graduate student in our college at the time of this study and Gann's graduate assistant. The article utilizes constructivism as a theoretical frame for the understanding of reading. It is written in Gann's voice.

Examining the literature

Contemporary Understandings of Reading

Teacher educators must attend to contemporary understandings of literacy in preparation for the classroom. The Common Core State Standards for English Language Arts stress students' ability to read text closely, to analyze its structure and underlying premises, to integrate its content with previous understandings, and recognize its underlying argument (2010). Its approach is distinct from that of the National Reading Panel (2000) which has powerfully influenced reading education for over a decade, conceptualizing reading as a discrete series of skills: phonemic awareness, phonics, vocabulary, fluency, and comprehension. The Common Core State Standards are more compatible with holistic conceptions of reading grounded in constructivism.

Constructivism and Reading

Constructivism is rooted in the work of Piaget and Vygotsky who conceptualized learning as a complex and non-linear process where students engage in creation of meaning (Fosnot & Perry 1996). It is influenced by Thorndike's notion of reading as reasoning (Stanovich, 1994). In Constructivist reading practice, students are encouraged to engage with text in order to absorb and critique its ideas. The stress is on eliciting students' thinking rather than on transmitting a particular understanding of text. Admittedly, this is difficult to accomplish in the reading classroom, since many students believe reading should happen easily and are thus unwilling to engage with inconsiderate text (Beck & McKeown, 2001). Nevertheless, proponents of Constructivism argue that reading is meaningless without constructive thought (McKeown & Beck, 1999). But Constructivism means different things to different people as Elkind notes (2005). Baines and Stanley are critical of Constructivism for fostering teacher passivity and mandating "a doctrinaire insistence on collaborative learning in the absence of teacher expertise" (2000). Such practice, in our view, is a distortion of Constructivist reading practice and its possibilities. We hold with those theorists and practitioners who see Constructivism as a recursive effort to understand the world as knowledge is acquired (Fosnot & Perry, 1996).

Literacy and Aliteracy

As noted in the Common Core State Standards Language Arts curriculum, effective reading in our era involves an ability to sort through staggering amounts of information and thoughtfully engage with text while utilizing cogent reasoning (2010). But in the past two decades, a number of authors have noted the disinclination of literate persons to read. In *Endangered Minds* Healy (1990), defined *aliteracy* as the avoidance of reading by people who are actually able to read. Healy contended that American literacy was declining, particularly among young people, who were overexposed to television. The data used to support this position were anecdotal and the analysis speculative, but other students of literacy have echoed Healy's ideas. Beers (1996) identified several types of literate non-reader: dormant readers who claimed they would read if they had enough time; uncommitted readers who found reading a chore, although they could process print; and unmotivated readers who thought reading entirely unpleasant and made little connection with print. Referencing Guiliano & Sullivan's (2007) perception that students at Chestnut Hill College required a "Bridge" program between high school and college, Anderson & Kim (2011) speculated that college students now read less proficiently because of television, video games, and the Internet. Blaming the Internet for promoting aliteracy is not entirely logical, since users of the web are actually reading. However, recent studies suggest that reading on digital devices may affect reading speed, and satisfaction in reading, Connell, Bayliss & Farmer (2012); Hsiu-Ping et al. (2012), Wright, Fugett & Caputa, (2013).

In contrast, Krashen (1993) argues that basic literacy has actually risen in the United States over the past hundred years. The problem, this author argues, is that our economy demands a level of literacy skill which much of the population currently lacks. Recent evidence seems to refute Krashen's point; literacy rates do appear to be dropping. Citing 2003 statistics from the National Center for Education Statistics, Britt (2009) concluded that 32 million US adults are functionally illiterate, i.e. unable to read newspapers or simple instructions. While Britt's article is journalistic rather than scholarly, the national statistics lend credibility to the author's point (National Assessment of Adult Literacy, 2003). However, it is important to avoid oversimplification and without common definitions of literacy (Ahmed, 2011), it is difficult to determine if literacy rates have actually declined.

Literacy and the Construction of Meaning

Literacy involves the ability to read carefully and critically. Electronic literacies have enabled information exchange and altered the way many of us read, but the use of such media in no way obviates the need for discriminating processing of text and the construction of meaning (Monin, 2008). To read well, minds must use language reflectively and persistently as solutions to problems are sought. Students may learn to decode written text, but without the construction of meaning, reading is a hollow exercise (Healy, 1999). For readers to evaluate the merits of varying positions, close attention to textual argument and perspectives is required (Fox, 2009). Careful reading involves extraction of meaning from text and relating new ideas to existing schema. Otherwise reading is experienced as taxing, consuming, and ultimately meaningless

(Pressley, 2002). Recognizing the importance of evaluation and synthesis of ideas to reading of all types, the Common Core State Standards Language Arts curriculum places high emphasis on the use of complex reading, both fiction and non-fiction (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

Aliteracy and Teacher Education

Dramatic shifts in contemporary literacy challenge our understanding of reading instruction (Tan & Guo, 2010). Whether reading proficiency has become lower, or if the general public simply reads less, teachers themselves must be expert readers. Educators will be pressured to raise standardized test scores in the name of accountability, and their professional competence will be questioned often. Teachers can expect to be micromanaged and denied the freedom to make requisite changes to outmoded methods of instruction (Duke & Pearson, 2002). If educators are to argue for autonomy in literacy instruction, their own expertise in reading must be unquestionable. Educators are often reluctant to depart from familiar modes of reading instruction. Gupta (2004) found that when pre-service teachers' beliefs about literacy were incongruent with those expounded in university classes, the majority preferred to teach as they themselves were taught. These findings are consistent with the work of Richardson, Anders, Tidwell, and Lloyd (1991) who found that following in-service training on reading comprehension, teachers in two Southwestern school districts, failed to incorporate the new strategies into their teaching. But Kropiewnicki (2006) found that with repeated modeling and direct instruction, pre-service teachers were able to identify and describe new comprehension strategies and incorporate them into instruction.

The reading process is complex. Different textual genres require a range of reading strategies, and capable readers automatically adjust (Duke & Pearson, 2002; Neufeld, 2005). Reading, notes Healy (1990), is not equivalent to word-calling, segmenting phonetic sounds, or even recognizing strings of letters that are not phonetically decodable. Comprehension, the ultimate purpose of reading, is an active process including extraction of meaning from text and connection to experience. While proficient readers find the encounter with text satisfying and productive, low comprehenders find reading consuming, and frustrating (Pressley, 2002). Comprehension is an unobservable mental process and therefore difficult to teach and assess. Accuracy, decoding, sound segmentation and reading rate are more easily measured. While myriad standardized tests assess comprehension via questions about short paragraphs, evidence suggests that comprehension instruction may be getting short shrift. The work of Durkin (1978) and Pressley (2002) suggested that in many classrooms, comprehension receives minimal time. Ness (2009) found that only 82 minutes or 3% of a total of 2400 minute observation were spent on reading comprehension.

Connections to Teacher Education Practice

We wondered if aliteracy was seeping into teacher education. A recently exposed conspiracy involved teachers hiring surrogates to take the PRAXIS in their place (New York Times, February 2, 2013). Had reading problems had factored into the decision to commit fraud. We were starting to think our teacher candidates been educated in classrooms where comprehension was underemphasized. Most were well under thirty and utilized digital media

with aplomb. We wondered if our students' reading instruction had made sufficient connection to literacies they already possessed. Was textbook comprehension beyond them, or did they simply choose not to read? None of the professional literature documented aliteracy in teacher candidates, so this suggested itself as an area for productive study.

An Illustrative Incident

I (Gann) had been noticing a certain shallowness in class discussion. Though the posted weekly assignments specified reading, the students seemed relatively unfamiliar with the material in class discussion. Sharp was having a similar experience. A colleague with whom we discussed this problem had stopped posting power points on the class website entirely, believing that when she did, the students read nothing else. The practice of posting power points was well nigh universal in our college. Pictures were often embedded into the power points, since most of our students described themselves as "visual learners." Our colleague's strategy seemed rather extreme. But a few days later, I was attempting to discuss an assigned reading with students in elementary education, most of them upper Juniors. The textbook was user friendly, loaded with lists of key terms, pictures, concept maps, sample step by step lessons, and connections to standards. The topic was vocabulary development. Posing a basic conceptual question, I inquired what, in the view of the authors, was the connection between subject area knowledge and vocabulary development. There were blank stares. A trifle perplexed, I asked how the authors viewed the relation between experiences, concepts, and words.

The students thirty some odd students shifted in their seats, sipping Cokes and bottled water. A few reached down in their book bags and tried to surreptitiously text. Finally, a curly haired student named Lacey (a pseudonym) ventured that knowing words is important. The response made me hopeful. When pressed to say more, she responded that you had to sound out a word in order to read. I agreed this was one way children identified words. Then I asked what the reading said about vocabulary and comprehension. The room grew extremely quiet.

This was not a bad class. These students liked working with children. They had experience in after school programs and summer camps. They were good at crafting imaginative hands on projects, and they danced rings around me when it came to using the classroom Smart Board. But were they reading? We had pretty good rapport, so I inquired about my suspicion, careful to keep my tone nonjudgmental. "I get the feeling that many of you are not reading. Am I correct?"

A blonde haired woman in her late twenties responded that few students actually read the book. Tracey (pseudonym) was what we call a 'non-traditional' student. The mother of two elementary school children, she was organized and serious about her goal of becoming a teacher. Tracey's grade on the midterm exam was the highest in the class. When asked how she had accomplished this without reading the book, the student explained that all needed information was on the power points. Several classmates agreed.

I asked if they were using the book at all. "If I have questions, I sometimes look in the book," said Kevin (pseudonym), a thirty year old Veteran attending school on the GI bill. "But sometimes, I just use websites to find what I want."

It seemed that my students were simply hunting around for facts they thought they would need while I was assigning information text to foster the construction of knowledge on the part of perspective teachers (Healy, 1999). How would they evaluate materials and methods for

classroom use if they were not reading themselves? How would they teach their students to read critically if they themselves were avoiding it? Or was I overstating the problem?

Additional Evidence

I wondered if my graduate assistant, McIlquham, had encountered this problem. A middle-aged candidate for the Masters of Arts in Teaching, his background was in business and computer science, so his was a different perspective. Did McIlquham have classmates who avoided reading?

Early in his program, McIlquham had taken a course in middle and secondary reading instruction where most of his classmates were undergraduates. On the first day of class, the professor inquired how many students read for pleasure. Only four hands in this group of thirty went up. Some of the students bragged they had never read nor even purchased a textbook in college, because they relied on the Internet, power point slides, and subject related videos. For McIlquham, the real shock came when the professor asked the students to identify their majors. Nearly half the students planned on becoming English teachers. If future English teachers were not reading, what hope was there that a new generation would develop a passion for literature?

Sharp was experiencing similar difficulties with an early literacy course required for Seniors in an Early Childhood education program the semester before student teaching. She and I had taught youngsters in public school. Both of us had assumed our pre-service candidates were skillful readers. Now, we feared that perspective teachers' discomfort with informational text could cascade through the schools of our region if it went unaddressed. Can a person coach soccer without knowing the rules of the game? Our students were Juniors and Seniors in college. What had gone wrong in their education, and how could we correct it?

My own students claimed they could read the texts but preferred not to. I thought this was largely true. Sharp's students were different. Many struggled with comprehension, and this was reflected on quizzes. Sharp would inquire if the students had read the chapter. Many responded they had but had not understood it. After many such interactions, Sharp asked her students if they knew how textbooks should be read differently from novels. They reported reading material straight through, and in their effort not to miss anything, they missed almost all the key points. Paradoxically, a surfeit of information was quite literally at their fingertips. These students owned iPads, smart phones and laptops; most had more than one such device. There were computer labs all over campus. But despite her students' ability to use these technologies, the process of critically examining text was eluding them.

The Common Core State Standards require high levels of critical literacy at all stages of reading development (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). How could our students help children develop deep comprehension and the ability to infer if they did not possess these abilities? It would be like hiring lifeguards who could not swim and then blaming them for not saving those who struggled in water. Obviously, students should learn to peruse and evaluate informational text well before college, but it appeared that many did not. As university educators, we felt responsible for addressing this deficit.

Studying the Problem

The evidence that our students were failing to read was anecdotal at this point. Since no earlier studies examined student self-reports of aliteracy, we undertook to explore the problem systematically in the Spring of 2012. Sharp and I work in a college of education, but in different departments. My students were teacher candidates in elementary education, 40 in a Junior level course in the teaching of reading, 19 in a Senior level course in reading assessment. Researcher Z. was serving as my graduate assistant. Sharp's 76 students were teacher candidates in an Early Childhood education program. Not all candidates in this program apply for teacher licensure, and the PRAXIS exam was required only for those who did. In both departments instructors are encouraged to post power points.

We used different texts in our courses. The upper Juniors I taught were assigned a textbook on reading instruction, while the Seniors in reading assessment used a collection of articles and an assessment manual. Sharp assigned a textbook on early literacy instruction and a series of related articles to her Early Childhood education students. Some of the assigned readings were dry or at times repetitive, but they were linked to our students' professional objectives, and both of us drew what we viewed as clear connections between text and the students' goals. It was evident, nevertheless, that some students were eschewing the textbook in preference for websites and power points

Methodology

To ascertain more information, we developed a Likert scale questionnaire which inquired into students' study practices. Participation in the anonymous survey was voluntary. The questionnaire was administered by MacIlquham, and the instructors were not present during its completion.

Survey Results

A total of 125 students took part in the survey. The questionnaire and its results are given in Table 2. On cursory examination, we saw that fully 22% of our students admitted to always reading power points instead of the textbook; 68% reported they did this sometimes; only 10% claimed never to engage in this practice. Only 13% of our students informed us they never skimmed assigned readings; 68% conceded that they sometimes did this, and 6% confessed that they always studied this way.

Table 1

Self-Reported Study Practices

Study Practice	Never	Sometimes	Always
I buy the assigned Textbook	0%	42%	58%
I read assigned material thoroughly	2%	83%	15%
I make notes on my assigned readings	9%	68%	23%
I underline or highlight assigned readings	11%	62%	27%
I only skim the assigned class readings	13%	81%	6%
I study course power points instead of using the textbook	10%	68%	22%
Rather than use a course textbook, I study from websites	51%	47%	2%
I think reading the textbook is a waste of time	35%	65%	0%
I think textbooks are boring	7%	76%	17%
I cannot understand most textbooks	32%	65%	3%
I use the assigned textbook, but only to locate information	12%	76%	12%

We organized the data into three categories: optimal reading practices likely to encourage critical engagement with text, alternative (and less desirable) reading practices likely to foster memorization and shallow thinking, and students' perception of textbooks. These are discussed below and presented in Figures 1 through 3.

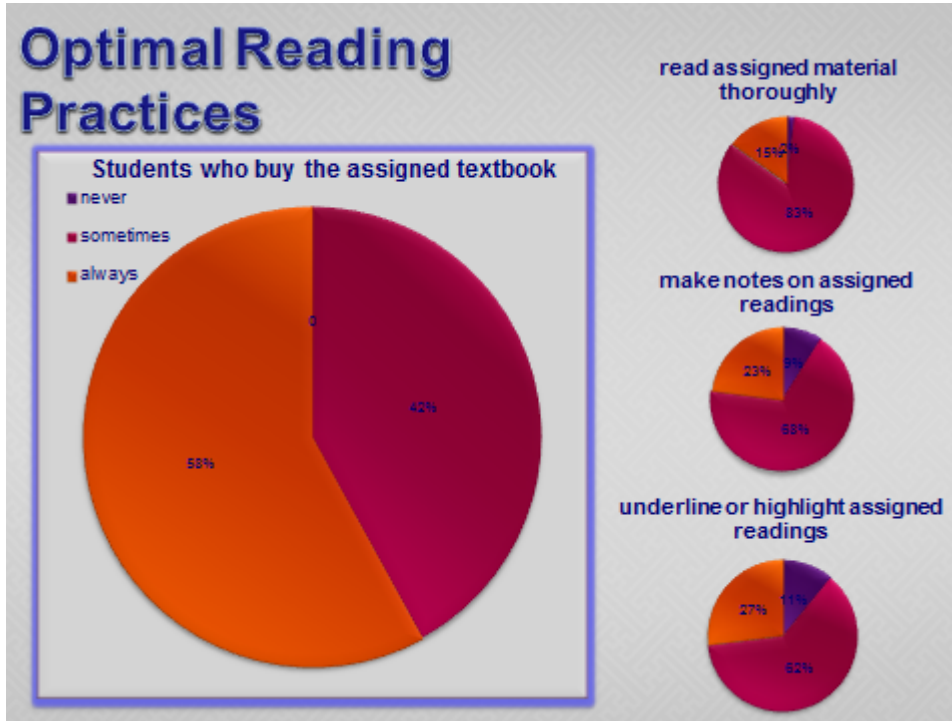


Figure 1. Optimal reading practices. Percentages of students who engaged in optimal study practices: purchasing course textbooks, making notes on assigned readings and underlining or highlighting readings.

More than half our students (58%) said they always purchased course textbooks; but 42% said they did so only sometimes. A minority of our students (15%) said they always read assigned material thoroughly; 83% said they did so sometimes; while 2% admitted they never did. All students practiced underlining and highlighting, with 58% saying they did so all the time and 42% sometimes.

Alternate approaches to reading.

There was considerable evidence that students bypassed conventional reading of text and engaged in reading practices unlikely to promote deep engagement. The overwhelming majority of the students admitted they skimmed assigned texts instead of reading thoroughly, with 6% saying they always did this and 81% sometimes. Only 13% of the students completing our survey denied skimming academic texts. The use of power points in preference to academic reading was also widespread: 68% said they did this some of the time; 22% reported they always did so. Only 10% told us they never did this. Using websites in preference to textbooks was somewhat less common with 2% of the students saying they always did this; 47% saying they engaged in this practice sometimes; and 51% stating they did not do this at all. Over three quarters of our students (76%) used the textbook to look things up; 12% said they never did, and an equal number said they did this all the time.

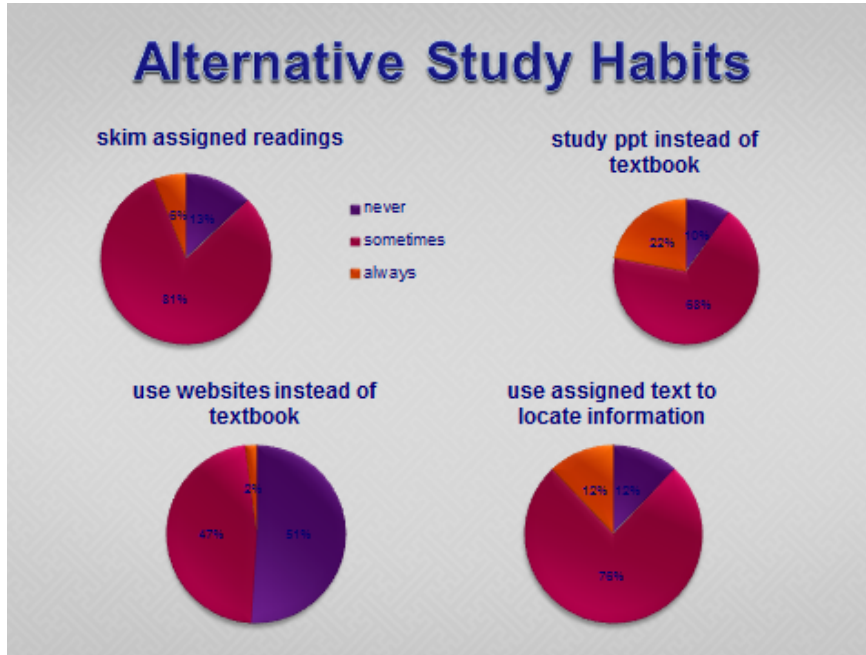


Figure 2. Alternative reading practices. Percentages of students who engaged in alternate study practices not involving close reading of the assigned textbook: skimming assigned readings, using websites instead of the textbook, studying instructor's power point instead of the textbook, and using the assigned textbook simply to locate information.

Students' perception of textbooks.

Despite their tendency to avoid reading textbooks, students did not believe that reading them was always waste of time. But 65% of the students said it was a waste of time "sometimes." Only 7% of the students thought textbooks were never boring; 76% said they were boring sometimes; and 17% believed textbooks were always boring. A majority of the students reported difficulty in reading textbooks, with 65% saying this happened sometimes, and 3% acknowledging that they always had trouble. Approximately a third of the students or 32% said they never had difficulty understanding textbooks. Thus, for nearly a third of our students, the problem was textbook aliteracy, not incomprehension. This result, while troubling, is consistent with the findings of the *National Survey of America's College Students* (2006). In its study of literacy levels among 1,827 randomly selected college students at 80 different institutions and utilizing the same testing materials as the National Assessment of Adult Literacy, only 37.5% of those tested scored at a "proficient" level consistent with college level reading; 55.5% were at the "intermediate" level consistent with middle and early high school; 7.5% were at a "basic" literacy associated with simple, everyday tasks, and 1% were unable to read at the even the most basic level. These levels, while considerably higher than those in the average adult population are cause for concern.

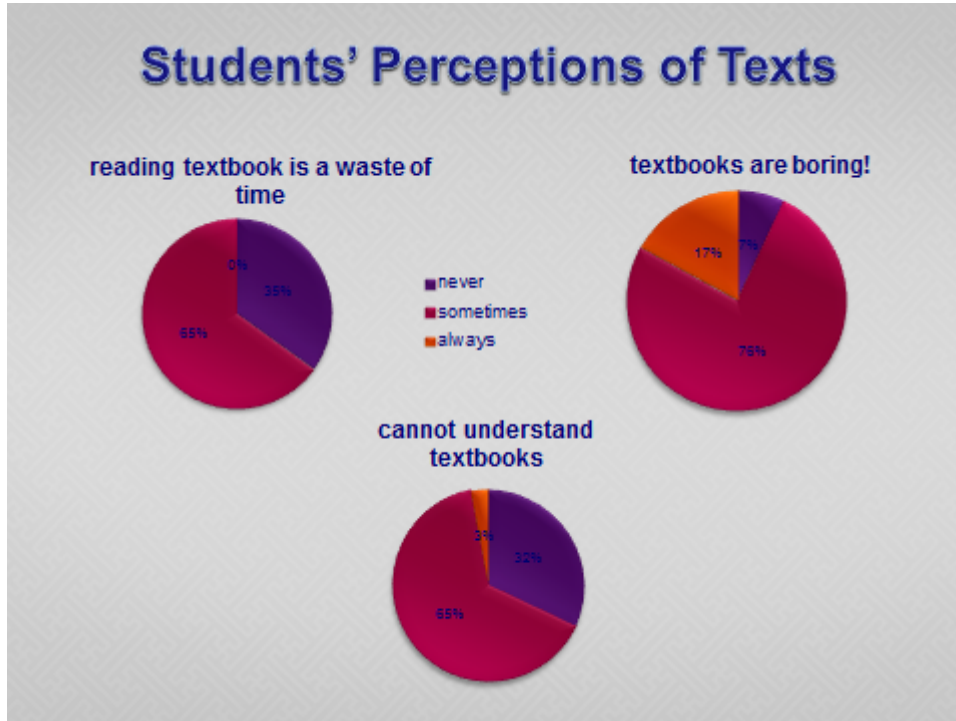


Figure 3. Students' perception of textbooks. How students experienced textbooks: percentages who understood them, found them boring or did not use them at all.

Discussion

Undeniably, teachers need to be proficient readers themselves; thus the findings of our survey are troubling. In this study 65% the students had difficulty reading textbooks at least some of the time, and 3% acknowledged that they always had trouble; thus while all were able to read, we do not believe they are fully proficient. The astoundingly widespread use of power points in preference to academic reading may have been a compensatory strategy for some of these less than proficient readers. It is disconcerting that 68% relied on this method some of the time, and 22% reported they always did so. Clearly, the students were reading, but their preference for an electronic outline to engagement with challenging writing attests to textbook aliteracy. Troubling too is the number of students who admitted to skimming class texts instead of reading thoroughly, 6% conceding they always did this and 81% sometimes. We question such students' ability to engage in a Constructivist process while reading, and the failure to engage deeply with also comprises textbook aliteracy.

Addressing the Problem

Two approaches.

Because our classes were dissimilar, Sharp and I developed differing strategies for ensuring that students would read. I (Gann) believed my students could do the required reading if compelled to, provided there was adequate scaffolding. Sharp, on the other hand, estimated that

only half her students were capable of reading the textbook independently. Sharp demonstrated strategies for reading non-fiction: summarizing; identification of text structure; not of main ideas and supporting details. She guided them in the preparation of structured summaries, pointing out that information from all levels of Bloom's taxonomy was necessary for text comprehension (1956). Both of us took time in class to demonstrate the identification of main ideas and the interpretation of graphs and charts. We also made ourselves available to students who struggled with informational reading. Sharp felt she had made real, but limited headway in helping her students become better readers.

Both of us had both been posting power points weekly and were concerned that 90% of our students studied them in preference to reading course textbooks at least some of the time. Feeling that many students would struggle without the scaffolding of power points, Sharp elected to continue the postings; I (Gann) opted to cease this practice, though I did make power points available for review the week before final exams. To ensure that students were reading, I administered short multiple choice quizzes every week. The bulk of the questions were inferential. I saw the practice as necessary, though my feelings about doing this with university Juniors and Seniors were decidedly mixed. Since I could not be confident every student could study the readings without support, I provided study guides and graphic organizers to accompany readings. I also assigned frequent essays requiring interpretation of text. These procedures made students unhappy, and early in the semester I issued multiple academic warnings. There were complaints to my department chair, but in time the quiz grades improved, and it was evident from class discussions that reading had increased. Clearly most of my students could read informational text at least at the literal level. There remained a few students who could not extract main ideas, and I encouraged them to meet with me weekly to work on reading development. Until then, my office hours had been under-utilized except when projects were nearly due; now they were filling completely, and I scheduled additional time. During these meetings, students and I worked on vocabulary, the identification of main ideas, and the drawing of inferences. Some students tried to persuade me to alter my teaching strategies. Often, they claimed to suffer from "test anxiety," which resulted in poor performance on quizzes. Only one such student had an actual phobic response to testing, though I am sure the quizzes upset students who had not prepared. Some attested the quizzes did not fit their "learning styles." When we explored this, I noted they found the textbook unenjoyable. Those who regularly attended my office hour showed great improvement.

Limited success.

I (Gann) was delighted with the method I was using, though I thought it a bit draconian. I believed our project had not only pinpointed what was wrong with our students' reading, but that long lasting ways of addressing the difficulty had been developed, ways our students would carry with them that would enhance their ability to benefit from later education, and which in time, they would pass on to students of their own. I flattered myself that students would use these methods to construct understanding of text in subsequent courses. Alas, not. In the Fall of 2012, 40 of the students from our original study were assigned to my Senior level reading assessment class. I assumed they knew the program we would follow: the readings, the quizzes, the study guides, the essays. I looked forward to reaping the fruits of my earlier labors, now that these students possessed the tools for constructing meaning from text. But early in the term and to my

great consternation, there were struggles around reading the textbook identical to those of the preceding term. It was as if the earlier semester had never occurred. Students resisted reading, whined when I would not post power points and complained to my chair. Once more, I sent out academic warnings, and once again, coercion worked. However, my predictions about what I accomplished were less grandiose.

Implications for Teacher Education

We have noted that our students are extremely savvy in the use of electronic data (Agosto, 2012), but less so in evaluating quality of information and drawing comparisons and connections between ideas. Our project documented widespread avoidance of textbooks among our students, sometimes because they found such reading difficult, but also because they simply chose not to do it. Unwittingly, we aided and abetted non-reading of textbooks by posting our power points. Beers (1996) distinguished between unmotivated and unskilled readers; among our students, there were some of each type. Since we did not utilize a random sample, the results of our survey are not generalizable; but our work suggests that teacher educators and others in higher education should be aware of textbook aliteracy. Our attempts at addressing the problem were partly effective, but appeared not to be long lasting. Coercion works, but it has limitations. Working with literacies teacher candidates bring would be preferable, but this goal is elusive. This would be a direction for further inquiry.

In an age of information, it is vital that we emphasize informational reading in teacher education (Barksdale, 2013). Otherwise, teacher candidates will be hobbled in their ability as reading instructors, and societal literacy will suffer. As a profession, we are subject to scrutiny by politicians and captains of industry. These outside critics will be justified in claiming we have not fulfilled our responsibility if those we purport to educate are not themselves fully literate. If we wish to retain control of reading education, we will need to insist that our students know more than the basics of reading.

There is a more profound reason to be concerned about our students' textbook aliteracy and their avoidance of connected text. For a democracy to thrive, its citizens must be adept at evaluating complex information; they must be critical readers who can construct meaning from text (Barksdale, 2013). Teacher candidates carry the rights and responsibilities of citizenship. In addition, they bear a profound responsibility to the next generation. The teachers we educate will shape future citizens of our Republic, who as participants in a democracy, must read to understand the events around them (Adams, 1865). Whether the information is read from a newspaper, a laptop or tablet computer is not important. For a democracy to function, its citizens must read and read well.

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