

# Content-Literacy-Based Instruction And the Common Core State Standards

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*The only way to learn how to read is by reading, and the only way to get students to read is by making reading easy.*

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## **Content-Literacy-Based Instruction and Achievement**

Literacy is the ability to read, write, speak, listen, and think to the benefit of self and society. Content-literacy-based instruction (CLBI) is the systematic use of these communication skills to analyze, create, interpret and present a range of media within content area subjects such as science, social studies and mathematics. In using reading and writing as tools for learning subject matter, students are put into better positions to see the relevance of the discipline and to master the course content. Literacy is vital for success in nearly every walk of life and the ancillary benefit of CLBI is that students are becoming more literate in the process of learning their subject matter in this fashion. Embedding literacy strategy instruction into the various subject areas exposes students, on a daily basis, to a wide array of reading opportunities in which many students are assisted to read well above their diagnosed reading levels. This consistent reading experience, so essential for success in both post-secondary education and for most careers, becomes second nature to the students exposed to these experiences.

What is often overlooked about CLBI, by either teachers or administrators, whose focus is understandably on development of literacy skills to meet increasingly rigorous demands from state and federal overseers, is that *CLBI enables students of all ability levels to better learn course content*, leading to achievement gains in all areas. The reasoning behind this assertion is hardly new (Herbert, 1908; Bloom, 1956; Vygotsky, 1978). However, recent research persistently reinforces and validates the earlier literature on what works in the classroom to enhance achievement (Gallagher & Allington, 2009; Forget, 2004; Hattie, 2010; Marzano, et al., 2001; Richardson, Morgan & Fleener, 2011; Schmoker, 2006, 2011). Modern technological innovations such as functional magnetic resonance imaging (fMRI) and positron emission tomography (PET scans) have only added more support on how the brain learns (Sousa, 2009; Wolf, 2007; Zull, 2002, 2004, 2011). Clearly, the literature is pointing to CLBI as a solution to more than one problem at once. In other words, the pedagogy is not about literacy alone. It is about much deeper learning through higher-order thinking that results from the scaffolded thinking associated with CLBI.

One particularly effective model that enables educators to implement content literacy is the *MAX Teaching* framework for instruction. *MAX Teaching* is a coherent, strategic, straightforward CLBI framework that employs the systematic use of reading, writing and cooperative discussion to help students learn their subject matter. *MAX* provides researched-based strategies in strategic literacy instruction for all courses. These strategies align with curriculum, integrate higher order thinking, and improve comprehension for all students. Every *MAX Teaching* lesson provides teachers with multiple opportunities to employ research-proven classroom methods such as identifying similarities and differences, summarizing and note taking, reinforcing effort and providing recognition, homework and practice, non-linguistic representation, cooperative learning, setting objectives and providing feedback, generating and testing hypotheses, and use of questions, cues, and advanced organizers (Marzano, Pickering, & Pollock, 2001). The essence of *MAX Teaching* is that it allows students to immerse themselves in what they are learning, giving each student an interpretive voice in the classroom, while, at the same time, allowing students to develop critical comprehension skills, making the busy-

work of worksheets, teacher lecture, and vapid “test-preparation” activities obsolete. *MAX Teaching* also provides skill instruction to enable improved performance while engaging all students in active learning from textbooks and other forms of textual matter.

In time, through deliberate practice using such mediated literacy instruction (Vygotsky, 1978), employing cooperative learning, students develop the ability to perform literacy skills independently. Stated another way – there is only one way to learn literacy skills, and that is by practicing them, and there is only one way to get students to practice literacy skills, and that is to make it easy for them to do so. That is what content-literacy-based instruction and *MAX Teaching* are all about. Two for the price of one – deeper understanding of the subject matter through the use of research-proven classroom techniques, and advanced literacy skills – a recipe for life-long success in college or career pursuits.

### **The Literacy Components of the Common Core State Standards**

There are important reasons for a school system to implement a content-literacy-based approach to instruction. Such an approach recognizes the need for college and career readiness, a goal that aligns with the vision of the recently revised Common Core State Standards (CCSS) (National Governors Association, 2011). These new state standards go beyond content objectives, requiring a *synthesis* of instruction in literacy skills and subject matter. They place high value on the concept of a knowledgeable and literate society. They reflect the notion that processing academic information through the filter of literacy-based instruction leads to achievement gains on state tests, partly due to the fact that literacy-based instruction facilitates classroom best practices (Forget, 2004; Hattie, 2009; Joyce & Showers, 2002; Marzano, et al., 2001; Schmoker, 2011). Effective instruction, college preparedness, career readiness, literate citizens, and achievement gains – any of these reasons by themselves would provide sufficient incentive to enact a literacy-based instructional process – taken together they provide overwhelming motivation to rethink curriculum in our schools.

The only way to learn how to read is by reading, and the only way to get students to read is by making reading easy.

What is college readiness? Most agree that college readiness is being qualified for placement into a degree-granting postsecondary education without remediation. Unfortunately, students leaving America’s high schools in 2010 are not academically college ready. Based on ACT results, less than half are ready for Algebra and only 34% are ready for Biology! Only 28% of students are ready for college level coursework in all four of the core areas (English composition, algebra, social sciences, & biology). American high school graduates spend billions annually on college remediation. Much of this lack of readiness is attributable to inadequate development of literacy skills. Furthermore, the lack of readiness reflects the lack of rigor in terms of the higher-order thinking that literacy-based-instruction can provide, especially with regard to informational text. ACT reports suggest that the ability of high school graduates to read complex texts strongly correlates to student performance in college. According to ACT benchmarks, only 38% of graduating students are ready for college reading. These results indicate that more emphasis needs to be placed on: 1. understanding complex texts, 2. language variety within different contexts and vocabulary, and 3. content-area reading and writing such as comprehension of science materials and history/social studies materials. One cannot deny the importance of literacy skills in the academic world.

Beyond academic needs, one also cannot deny the importance of literacy skills in the professional world. In the United States, the fastest growing professions have the greatest literacy requirements, and conversely, the professions that are most rapidly declining have lower than average literacy demands (Barton, 2000). If

“literacy is the ability to read, write, speak, listen, and think such that one is able to process information and ideas in ways that are useful to self and to society” (Forget, 2004, p. 18), then schools need to put students on a trajectory that will facilitate the acquisition of such abilities.

There is a significant gap between what schools currently teach and what students need in order to be successful in college and their careers (Wagner, 2010). Students graduating from today’s schools have a hard time with the rigor of critical thinking and problem solving in college and careers because they have spent some twelve years in classrooms most often thinking at the lowest cognitive levels. According to Wagner, who has been observing American classrooms for over 20 years, *this is true for even our best schools*. Among the reasons for such bland curricula are several factors, including tradition, current testing practices, and lack of professional development for teachers. Wagner believes that there are seven skills that would allow our students to thrive in 21<sup>st</sup> Century careers. The list includes: critical thinking and problem solving, ability to collaborate, adaptability, initiative, effective oral and written communication skills, ability to access and analyze information, and curiosity and imagination. Wagner suggests that these seven skills are the same ones that will enable students to become productive citizens who contribute to solving some of the most pressing issues we face in the 21st century. Students immersed in scholastic programs with teachers using content-literacy-based instructional activities would be acquiring these very skills at an early age and then honing those skills as their schooling continued. What Wagner, and other content literacy advocates have been pushing for decades, is now reflected in our new National Standards – The Common Core.

**We must teach students explicitly how to do active reading of non-fiction text – routinely at every grade level – several times a week in every subject area.**

Released in 2010, the **Common Core State Standards (CCSS)** is a set of national curriculum requirements designed by The National Governors Association Center for Best Practices, in conjunction with the Council of Chief State School Officers. The CCSS is organized along two strands, Mathematics on the one hand, and English/Language Arts (ELA) on the other. The ELA standards include a wide spectrum of subject areas including English, language arts, social studies, science, and technical programs. These standards define the knowledge and skills students should know and be able to do within their K-12 education so that they will graduate high school able to succeed in entry-level credit-bearing academic college courses and in workforce training programs. Forty-four states (soon likely to be 48) plan to fully implement the standards for the 2014-15 school year. The CCSS has several features that align with a content-literacy-based instructional format, suggesting incorporation of more non-fiction reading and writing, an integrated view of literacy, and standards for speaking and listening, with the overarching goal being the development of self-directed learners by using an approach to standards-based curricula that includes greater rigor and relevance.

Realizing that the majority of current graduates are not college- and career-literate, the CCSS has shifted the curricular focus from fiction to non-fiction reading and writing. The fourth grade standards for ELA will necessitate that 40 percent of classroom reading be done with non-fiction. By the twelfth grade the non-fiction requirement increases to 70 percent. This reflects the obvious fact that there just are not many occupations where employees can read fiction on the job. We must teach students explicitly how to do such active reading of non-fiction text – routinely at every grade level – several times a week in every subject area (Schmoker, 2010). Content-literacy-based instruction such as *MAX Teaching* facilitates turning the new literacy standards into reality.

Similarly, the CCSS emphasizes growth in non-fiction *writing*. In fourth grade, the ELA standards require that 50 percent of writing be informational in nature, progressing to 70 percent by the twelfth grade. Compare this with the miniscule amount of informational writing that is currently practiced in most schoolrooms today. Some argue that the most vital part of the CCSS is the inclusion of informational writing in all subject areas (Reeves, 2010; Schmoker, 2011). "The lesson to learn from the last 30 years should be this: We will never educate all students until we appreciate the value of time and stop preventing them from engaging immense amounts of time in reading, discussion, and writing. These are the indispensable and primary means of acquiring content knowledge and intellectual skills even – and especially – in a digital age." (Schmoker, 2011, p. 75-76)

The CCSS recognizes this need for an integrated model of literacy. To quote the actual document, "The Standards *insist* that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school" (emphasis added) (CCSS ELA, p. 4). The impetus behind this interdisciplinary approach is the requirement that students become skilled readers of informational text, which is best accomplished by reading, writing, and discussing within classrooms of the various disciplines. The standards also specify that teachers in social studies and science are responsible for teaching and assessing reading, writing, speaking, and listening as well, a directive that is particularly important at the secondary level (Reeves, 2010). The idea that content area teachers practice literacy instruction becomes non-negotiable by the year 2013. By then, every educator will have to be a teacher of literacy. Given what we know about content-literacy-based instruction, and the resulting improvement in student understanding of course material, what content teacher would *not* want to become accomplished at employing the instructional techniques? Gains in student achievement will inevitably convince even the most reluctant teacher to make the changes required to implement the curriculum.

Proficiency in 21st century skills is the new civil right for our times.

The new content-literacy standards endorse the idea that the need for individual literacy skills is greater than at any time in human history. The standards also recognize that relevance and higher order thinking lead to subject mastery, higher achievement scores, and college and career readiness. The new standards are fewer, clearer, more relevant, and literacy-based, all of which makes the increase in rigor possible. Earlier content standards were, in most cases, so numerous that many teachers felt compelled to go for coverage of content over rigor and mastery. Such coverage often leads to the need to simply transmit information at the least rigorous taxonomic levels of "knowledge" and "comprehension" (Bloom, 1956). With fewer compulsory standards in the CCSS, teachers will be able to probe more deeply into those standards, allowing for higher-order thinking about the content (Bloom, 1956; Anderson & Krathwohl, 2001; Marzano & Kendall, 2007). Students must do more than just retrieve information (Zull, 2002, 2004, 2011). When thinking at the higher levels of Bloom's (or others') taxonomies, students engage in more complex ways of using information. These higher levels of thinking include analysis, creativity, problem solving, and evaluation. The ability to perform higher-order thinking actually becomes integrated into the minds of students. Such rigor leads to in-depth mastery of content as well. Leveraging the time and skills of each and every teacher, making sure that they are helping students to think critically is a process that over time can add enormous value to lives of students and society as a whole.

The CCSS use terms such as analyze, infer, integrate, address and solve problems, evaluate, delineate, and annotate. These terms appear throughout the CCSS because it is widely accepted that such classroom behaviors will not only make learning more interesting and relevant to students, but also facilitate an end to the disconnect between what colleges and potential employers are looking for and what our schools are presently providing. Content-literacy-based classroom activities are language-rich, and require not only reading and writing, but also the abilities to speak and listen to communicate ideas fluently and precisely.

A familiar goal of both *MAX Teaching* and the CCSS is to develop “self-directed learners” (p. 7). A key feature of the *MAX Teaching* process is the modeling that is so essential to development of literacy skills. *The Skill Acquisition Model*, which is an integral part of the *MAX* process, introduces and models literacy skill(s) for the students, allows the students guided practice in using the skill(s), and asks students to reflect on the use of the skill(s) in helping them learn and deeply understand the content as a result of the skill(s) they are using. This process cements skills that students can transfer within school and beyond. The CCSS shares this vision. The document states that for students to be college and career ready they need to acquire literacy skills as they advance through the grades. Students must develop understandings of the processes prescribed by both *MAX Teaching* and the CCSS and their ten guiding principles:

1. Make close reading of texts central to the lesson,
2. Structure the majority of instruction so all students read grade-level complex texts,
3. Emphasize informational texts from the earliest grades on,
4. Provide scaffolding that does not preempt or replace text,
5. Ask text-dependent questions,
6. Provide extensive research and writing opportunities (claims and evidence),
7. Offer regular opportunities for students to share ideas, evidence, and research,
8. Offer systematic instruction in vocabulary and academic language,
9. Provide explicit instruction in grammar and conventions,
10. Cultivate students’ independence.

*Everything* a teacher does works! However, some things work much better than others do.

### **What the Research Says about Content-Literacy-Based Instruction**

Thanks to the work of many dedicated people, the research is clear on what works. Research suggests that teacher effectiveness is the most important factor in student growth and a teacher using high-impact strategies can have a significant effect on student achievement, closing the gaps created by other variables such as the student’s home-life and socioeconomic status (which both have a .57 effect size, a measure that reflects a mean percentile change of approximately 22 points). Teachers who use appropriate instructional strategies have the biggest impact on the growth of students (Hattie, 2009; Joyce & Showers, 2002; Marzano, 2001; Schmoker, 2006, 2011).

We all know that there is no such thing as a magic “silver bullet” that will suddenly cause great achievement gains for all students. However, if we correctly understand recent research, very significant gains can result from instruction that combines formative assessment and generous amounts of feedback (Black & Wiliam, 1998). The Black & Wiliam study was a game-changer that really moved formative assessment to the front lines of education initiatives. Their comprehensive review of formative assessment research concluded that formative assessment has a very positive impact on student learning. They found formative assessment to be effective in all grade levels, content areas, and in both knowledge-based and skill-based disciplines. Formative assessment, used properly, also closes achievement gaps by enhancing motivation and building metacognitive skills in low achieving students.

The roles played by feedback and formative assessment in a well-run classroom should come as no surprise to anyone who is a coach, or to anyone who has ever had a great coach. Imagine yourself trying to learn a game – golf, or tennis, or soccer for example – and never having anyone to observe you, provide feedback, and help

you to develop and refine your skills. You certainly would not advance very far in the sport. The same is true for classroom learning. A classroom in which feedback – teacher-to-student, student-to-student, text-to-student, and student-to-teacher – is abundant is like a well-run practice. Players develop because of their own efforts as well as because of all the feedback that helps them to refine their actions. In fact, in a *MAX* classroom, the teacher does not have to wait until a quiz or test to find out how students are developing. The teacher can observe the students in action as they discuss their interpretations of what they have read, affording the opportunity to address immediately any issues of comprehension or procedure. Through diligent use of the *Cooperative Learning Model* – another essential element of the *MAX* process – while students are visibly using language to help each other perform higher-order thinking about the subject matter of the day, the need for feedback becomes apparent to the teacher and/or to students. Thus formative assessment is a team effort that happens throughout the learning experience. Whether mathematics, science, social studies, or any other subject, formative assessment happens on the spot – before it is too late.

Whether we end up as rich, poor, beggars or thieves, has everything to do with how well we learn to read. If we learn to read well, all kinds of opportunities open up for us, and our lives are enriched in every conceivable way. If we do not, the chances are we'll live much more isolated and less satisfying lives. So depriving people of the opportunity to read, for whatever reason this happens, is one of the most abusive things a society can do to its citizens.

Research on formative assessment and feedback since the work done by Black and Wiliam have not only validated their findings, they have made it seem as if it had been understated. John Hattie spent 15 years researching factors that affect achievement, and he created a synthesis of more than 800 meta-analyses, involving more than 50,000 studies in total, and including more than 237 million students in all. His research clearly shows what works, and what does not work, in enhancing student achievement. *Everything* a teacher does works! However, some things work way better than others. Using effect size as a measurement tool, Hattie worked out a “hinge point” of .40, suggesting that any effect size below a .40 might happen with or without effective instruction (Hattie, 2009, p. 17). In other words, any gains in achievement below a .40 effect size might result regardless of what a teacher does. On the other hand, an effect size greater than .40 suggests that significant achievement gain has occurred as a result of the pedagogical variable. Two of the top five variables reported under the category of teaching are formative assessment and feedback with a .90 and a .73 effect size respectively. These effect sizes can be compared to numbers that Hattie found regarding socioeconomic status and home life, both at a .57. Below is a table listing some of the achievement-related variables with results above the .40 hinge point. Each of these is a routine component of the *MAX Teaching* framework of instruction:

Formative Assessment	d = .90
Reciprocal Teaching	d = .74
Feedback	d = .73
Meta-Cognitive Strategies	d = .69
Teaching Strategies	d = .60
Cooperative Learning	d = .59
Modeling examples	d = .57
Peer Tutoring	d = .55
Questioning	d = .46



There is a direct link between the use of these behaviors and student achievement. A teacher properly engaging in their use on a daily basis will see growth in his or her students. "The essential parts of a good lesson include a clear learning objective with some effort to provide background knowledge or create interest in the topic, teaching and modeling, guided practice, checks for understanding/formative assessment, and independent practice/assessment (which can be one and the same)." (Schmoker, 2011. p. 52-53)

### **Conclusion: Doing the Right Thing**

Literacy is the civil right of the 21<sup>st</sup> century (Bellanca & Brandt, 2010). Even if the Common Core State Standards did not "insist" that we substantially increase our use of literacy instruction, shouldn't we anyway? Given literacy's multiple benefits, is it even possible to give literacy too much attention? Is it possible to have overly literate students? And what if our educational system produces even more under-literate students? Such an outcome would be criminal. In his book, *Why America's Children Can't Think*, Peter Kline comments, "Whether we end up as rich, poor, beggars or thieves, has everything to do with how well we learn to read. If we learn to read well, all kinds of opportunities open up for us, and our lives are enriched in every conceivable way. If we do not, the chances are we'll live much more isolated and less satisfying lives. So depriving people of the opportunity to read, for whatever reason this happens, is one of the most abusive things a society can do to its citizens" (Kline, 2002).

Let us calculate the price of inaction. A recent study done by the American Educational Research Association revealed that inadequacy in reading skills is a bigger predictor of a student dropping out of school than is poverty (AERA, 2011). In fact students in poverty that have proficient reading skills have virtually the same graduation rates as wealthier students. Another study revealed that students who struggle with reading in the first few years of elementary school make up 88 percent of dropouts (Bureau of Labor Statistics National Longitudinal Study of Youth). In 2008, 54 percent of high school dropouts between the ages of 16-24 were unemployed! Not only are these unemployed dropouts not making fiscal contributions to local, state, and federal governments but they are a drain on taxpayers in more ways than one. Male dropouts are far more likely to end up in prison than their high school graduating peers and a staggering 47 times more likely to be incarcerated than similar aged men with four year college degrees (Sum, et al., 2009). The annual expenditure of more than \$50,000 it takes to incarcerate a single prison inmate costs taxpayers more than it would cost to provide that same human being with the annual tuition at any Ivy League university! In Ohio alone over 40,000 students dropout of school each year, leading to more than 10.5 million dollars in lost wages and millions of dollars in extra medical cost burden for taxpayers due to lack of coverage for the unemployed or underemployed. If we were to reduce the dropout rate in Ohio by even five percent, taxpayers would save over 233 million dollars per year. In Colorado, 82 percent of inmates are high school dropouts and 60 percent of dropouts are chronically unemployed (Balfanz, 2008). Many of those lacking literacy skills ultimately drop out of school and end up in the criminal justice system.

In sum, what literacy adds to one's life is critically important in many ways, and the risk of inaction has vast economic and moral consequences to society. We, as teachers of children of all ages, and in all content areas must come to terms with the notion that we have the power to profoundly affect the lives of all the students who come through our classrooms. What it takes may require change, and change is sometimes difficult. But, since we know what works, and what does not work, does it not behoove us to do the right thing?

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