# Frontloading the Core Curriculum:

## A New Whole-Class Anchored Instruction Approach That Builds Background Knowledge, Understanding and Engagement for Diverse Learners

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Abstract: This paper introduces a new supplemental instructional model that anchors the core content area curriculum for the entire class. Individual teachers can easily implement the approach in their classrooms in order to boost student understanding and engagement. The approach combines short original films and student-led collaborative learning activities. The films build background knowledge and provide a common experience so that each student begins instruction with the same mental model. The combination of anchoring and collaborative learning enables learners with a wide range of abilities to demonstrate similar levels of understanding and reasoning through writing and discussion.

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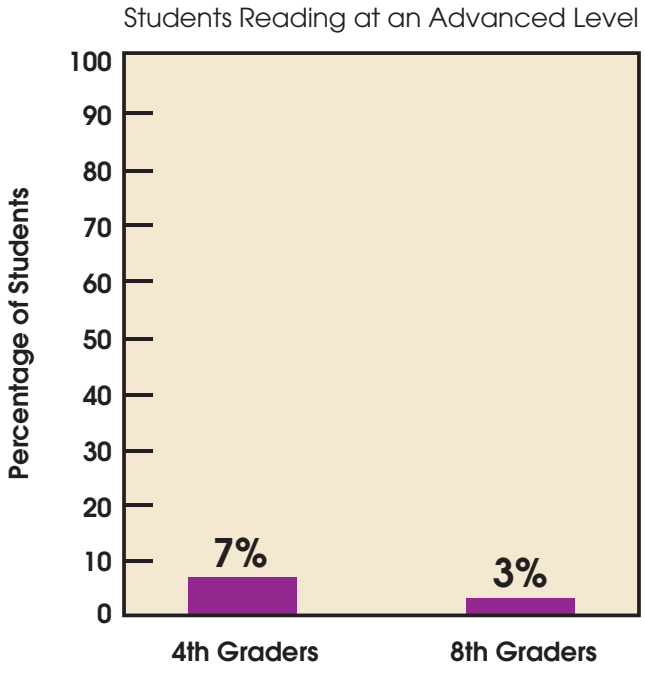
## The Learning Conundrum in the Content Areas

As any 4-8th grade teacher can attest, a significant percentage of students fail to establish sufficient understanding and engagement in the core subject areas. Teachers routinely describe their students as having difficulty with tasks that require reasoning and interpretation. They often describe with frustration the students who are able to read expository texts with automaticity, but "10 seconds later, have no idea what they just read". Such observations are borne out by the data: fewer than 3% of 8th graders can analyze and extend information which is required for reading at an advanced level[1] (Donahue et al, Figure 1).

**Figure 1**




National Assessment of Educational Progress, 2005

This widespread problem is due to a combination of factors, and not just the lack of decoding, fluency, vocabulary, and/or reading comprehension skills that affect 25% of middle school students nationally[2] (Kamil 4). Instead, each contributing factor constitutes a very significant challenge of its own:

1. *Lack of motivation and engagement.* Many students, regardless of ability, just aren't interested in school work, and research has shown that intrinsic motivation for the academic subjects declines in middle school[3] (Guthrie, Alao and Rinehart).

Educators know how important motivation and engagement are to learning. According to a recent NREL survey, "Helping students become self-directed learners"[4] was ranked near the top of identified priorities by 75% of teachers and 83% of administrators. However, adolescents tend to be interested in the Internet and various forms of interactive communication (games, chat rooms, text messaging, blogs), yet many who actively engage in complex reading and writing activities on their own fail to connect in any personal way with their school work.

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2. *Widely-ranging levels of ability.* Today's students are more diverse than ever through a complicated set of dimensions. In addition to ability, level of preparation and socio-economic circumstance, students' oral language, vocabulary and interests also vary, as do their abilities to self-regulate and concentrate. Large diverse classrooms place tremendous pressure on teachers to meet a wide range of individual needs, and many content area teachers simply aren't adequately prepared or equipped to meet that instructional challenge. According to the *Reading Next* report, "A full 70% of U.S. middle and high school students require differentiated instruction—that is, instruction targeted to their individual strengths and weaknesses."[5]

"The single most important variable in learning with texts is a reader's prior knowledge"[6] (Vacca and Vacca).

3. *Insufficient background knowledge.* Students also bring highly varying levels of prior knowledge to the classroom. For those who lack the general knowledge necessary to acquire and integrate new information, the textbook content can assume an unrealistic depth and variety of background knowledge[7] (Beck and McKeown). Insufficient background knowledge hinders learning because students lack the vocabulary and frame of reference necessary to form appropriate mental pictures[8] (Hasselbring and Goin). Not surprisingly, multiple research studies have identified a strong relationship between academic background knowledge and achievement[9] (Marzano).

4. *The "stand-and-deliver" teaching mode.* While the traditional lecture and question-answer mode of instruction is probably the most time-efficient mode for covering content, students need to go deep into material and make connections in order to learn with understanding. Unfortunately, many content area teachers tend to be most comfortable and familiar with the lecture style which can undermine students' motivation to participate academically as it can bore students when they don't have opportunities to interact with texts, other students and the teacher[10] (Lee).

"…figuring out how to close this gap in terms of broad knowledge and reasoning is the thousand-pound gorilla in the system"[13] (Torgeson).

In sum, these factors present a complex and daunting conundrum for teachers, many of whom "feel bewildered and frustrated, almost paralyzed, about how to teach"[11] (Blintz). The situation has been made worse by the standards and accountability era's demands to spend more time covering the curriculum and engaging in test preparation drills.

Today's content area teachers need innovative classroom approaches and resources that provide the background knowledge, differentiated support and engagement students need to assimilate knowledge and develop higher-order thinking skills. To be effective, such approaches need to integrate with the curriculum and provide an alternative to teacher-centered instruction and passive learning[12] (Alvermann). They also must be feasible in terms of time-efficiency, ease-of-use and overall cost.

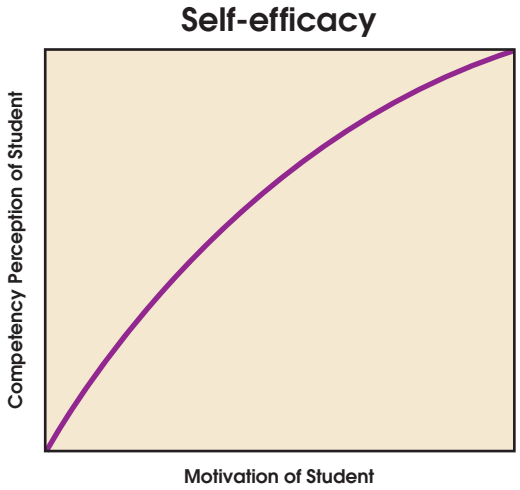
## Research Basis for a Solution

The following research-based methodology can help teachers solve the content area conundrum. These essential approaches are feasible for content area teachers to implement in their classrooms, in conjunction with their existing teaching materials, methods and time constraints.

### Engagement and motivation

Engagement is the most important aspect of instruction related to academic outcomes, and it requires students to be actively involved in their learning[14] (Guthrie and Wigfield). Engagement is the ability to sustain deep learning once students have been motivated and enabled to feel good about their ability to accomplish specific tasks (self-efficacy).

Figure 2




Self-efficacy is critical to establishing motivation because adolescents' perceptions of how competent they are as student learners affect how motivated they are to learn in the content area classes (Figure 2). Students need explicit instruction and support in order to be able to establish self-efficacy. Anchoring and collaborative learning activities can facilitate that process.

"Goal setting and students' self-efficacy beliefs and academic and personal goals at the beginning of the semester served as predictors of students' final course grades in social studies"[15] (Zimmerman et al).

### Anchored instruction

Because students construct new knowledge and understanding based on what they already know and believe[16] (Bransford, Brown and Cocking, 10), and many students lack the foundation necessary to assimilate new facts and ideas in the context of a conceptual framework, teachers need to ensure that each student has sufficient, relevant and correct background knowledge for instruction, discussion and reading. Anchoring is one method for building and utilizing background knowledge. Through the anchored instruction model, the class begins with a common experience so everyone starts on the same page[17] (Hasselbring). This provides each learner with an accurate mental model that often can't be provided with textual or verbal descriptions alone.

One particularly effective method to create a shared experience is through film. Film anchors provide contextual supports that can make learning more meaningful for students who lack knowledge or hold misconceptions[18] (Bransford, Sherwood and Hasselbring).

Anchoring can make content more engaging for all learners by establishing a rich context that facilitates shared learning experiences[20] (Rieth et al). This has important implications for developing higher order thinking through discussions with groups of students who have widely varying skill levels.

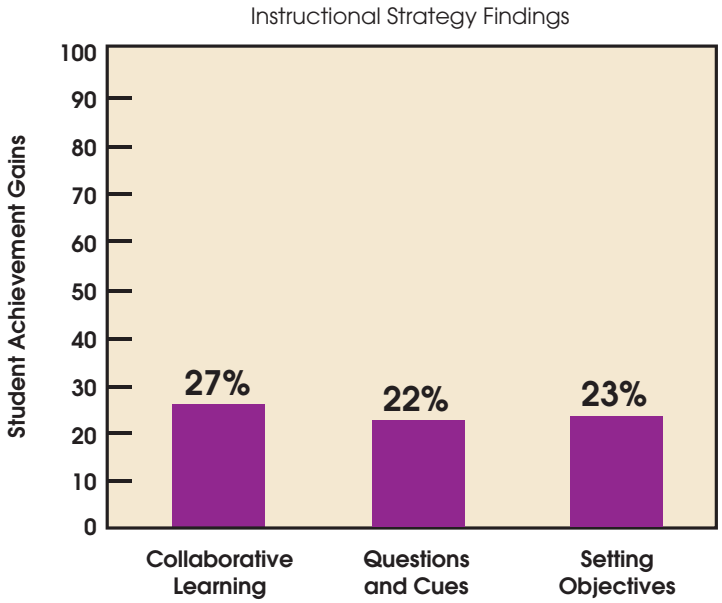
"There is a good deal of evidence that learning is enhanced when teachers pay attention to the knowledge and beliefs that learners bring to a learning task, use this knowledge as a starting point for new instruction, and monitor students' changing conceptions as instruction proceeds"[19] (Bransford, Brown and Cocking, 11).

### Collaborative learning

The traditional teacher-centered lecture/textbook mode of instruction is the most prevalent approach in secondary classrooms[21] (Wade and Moje). The approach is time- and resource-efficient for large classrooms of students because it centers attention on the subject expert: the teacher.

Unfortunately, teacher-centered instruction has its limitations. Participatory (student-led) approaches are much more effective in actively engaging students in individual and small group learning, promoting the peer interaction and scaffolding that many students need in order to learn with understanding. Collaborative learning activities such as student-led discussions also facilitate metacognition which is necessary to incorporate into the content areas (Figure 3).

Figure 3




Marzano et al, 2001

Discussion is an integral part of the anchoring process and is perhaps the most neglected language art in schools. Through discussions, teachers need to use structured questioning supports in order to move learners from lower to higher cognitive processes[22] (Nystrand et al). Questioning as a comprehension strategy is often overlooked by even the best teachers. Questioning needs to begin while information is being previewed and continued during and after instruction.

Despite the benefits of student-led discussions, students actually spend a very small amount of time engaged in generating questions, setting the purpose for learning and other student-led activities[23] (Harvey et al).

## A Practical Classroom Approach

Based on engagement, anchoring and collaborative learning methodology, Don Johnston Incorporated developed a practical classroom approach designed for individual content area teachers to easily implement in their classrooms. Commercialized as the *Incite!™ Learning Series*, the approach combines original short films developed specifically to build background knowledge and anchor the regular curriculum in key topic areas, with a supplemental instructional model that integrates student-led discussion, thinking, questioning, writing, organizing, listening and viewing (Figure 4).

Figure 4

Each *Incite!* lesson is presented at the beginning of a key curriculum topic for the entire class. The lessons anchor and **complement the existing core instructional materials**. The publisher's goal for the *Incite!* program is that it be very easy and time-efficient for teachers to implement, and that students at every level of ability achieve deeper levels of engagement and learning in the core curriculum.

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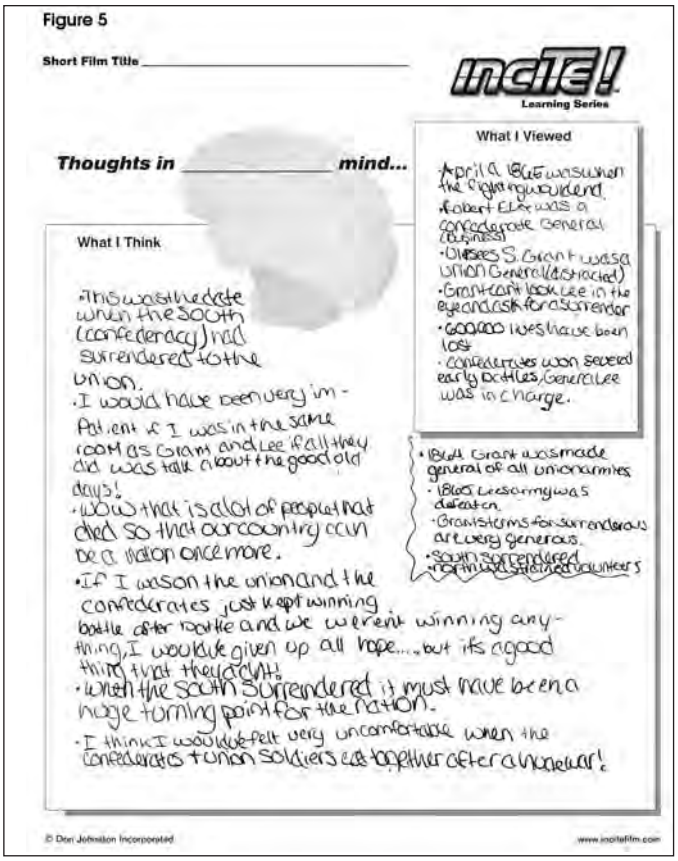
### Anchoring instruction with short topic-driven films

Each *Incite!* lesson begins with the entire class viewing a 5-7 minute film produced specifically to "frontload" and anchor the curriculum by providing a common background knowledge on which to base instruction. The films were developed from standards, shot at historical sites around the world and cast (in many instances) with young characters who students can relate to. The scripts were created with particular attention given to the development of language, vocabulary, general knowledge and the introduction of background knowledge. Specifically, the films assume very little background knowledge, which helps students build a common foundation for subsequent learning.

Because the films are short and on DVD, they can be viewed repeatedly by the entire class, small groups or individuals, both at school and at home. Students can check out the films for viewing on portable devices. The films can be viewed for review and make-up assignments.

### Establishing purpose with *Thought Sheets*

Immediately following the film, students take several more minutes to write down their thoughts using an *Incite! Thought Sheet*. Rather than recalling facts or summarizing information, they are specifically directed to write down what the film made them think of, what emotions they felt, and what questions or opinions may have come to mind. Each *Thought Sheet* (Figures 5 and 6) provides evidence of the students' own thinking; there are no wrong answers. Students can write or illustrate their ideas and opinions. This exercise, which enables students to make a personal connection with the content, engages them, cements their knowledge and facilitates memory and achievement[24] (National Institute of Child Health and Human Development). As students formulate their own questions, they drive purpose-setting which builds intrinsic motivation.

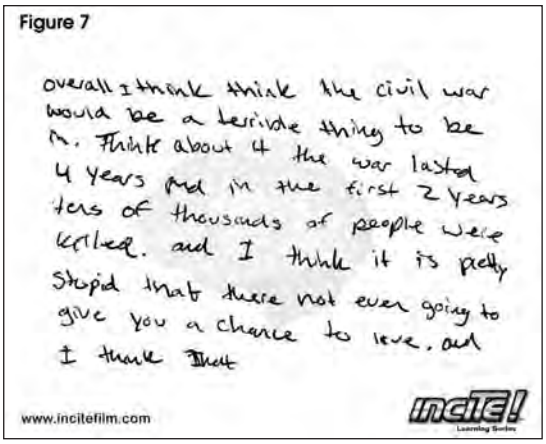




When teachers later review the *Thought Sheets*, they can see what prior knowledge their students have and what misconceptions might need to be changed. Teachers can assess what types of connections each student has made and how each student's thinking and questioning is evolving.

### Making connections through paired and group discussions

Once the *Thought Sheets* are completed, each student shares and discusses his or her work with a partner. This interactive discussion helps them clarify their opinions and questions, make new connections and deepen their learning. Each pair "rehearses" what they would like to say to the larger group, and writes down their most important (to them) comment, opinion or question on a sticky-note (Figure 7). This process promotes re-evaluation of information, analysis and synthesis.



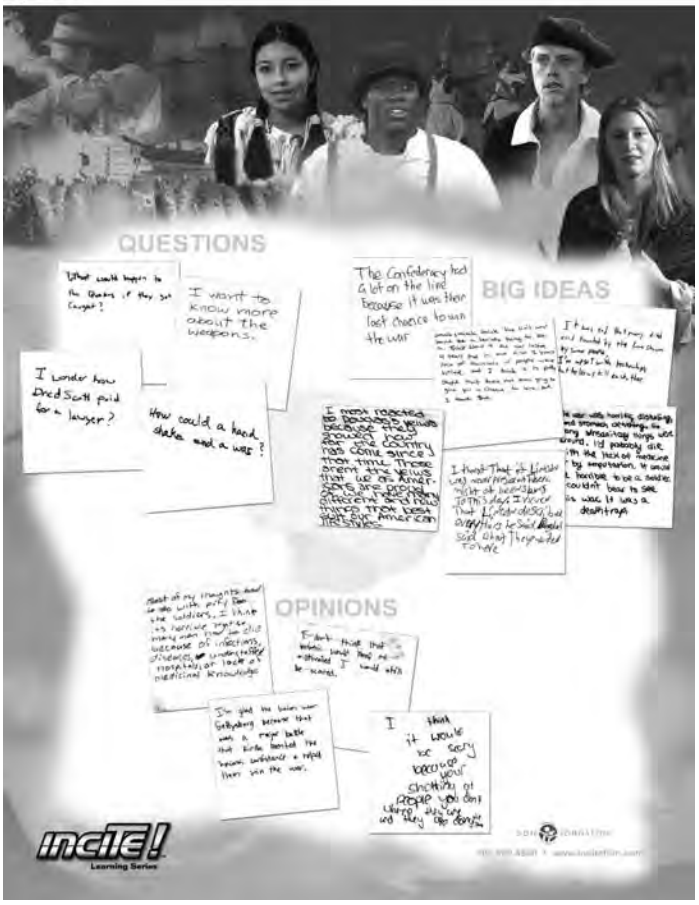

Each student's sticky-note comment becomes public during a whole-class discussion, which is the final step in the *Incite!* lesson. Someone volunteers their sticky-note which launches a discussion. Those with similar sticky-notes participate. They place their stickies on an "anchor" poster.

**Figure 8**

| The Knowledge Dimension | The Cognitive Process Dimension | | | | | |
|---|---|---|---|---|---|---|
| | Remember | Understand | Apply | Analyze | Synthesize | Evaluate |
| Factual Knowledge | | | | | | |
| Conceptual Knowledge | | | | | | |
| Procedural Knowledge | | | | | | |
| Metacognitive Knowledge | | | | | | |

During the discussion, the teacher needs to facilitate questions that lead students through Bloom's taxonomy (Figure 8) and help students see how their thoughts relate to larger concepts. This process further supports making connections and relationships between thoughts and ideas, and the teacher can ensure that each student is actively participating and part of the process.

**Figure 9**




As the entire class puts their notes up on the poster (Figure 9), the teacher and students group their thoughts. The result is a poster containing the *Class Thoughts* and *Class Questions* that documents and becomes the anchor and student-driven purpose for learning. As the teacher proceeds with the core instruction, the class can refer back and add to the poster as students read texts, listen to lectures, participate in other discussions or view additional anchor films on the topic to see how the new information relates to the posting and how it may answer their questions. The poster becomes a reference document for students as they proceed with the lesson.

The *Incite!* writing activities explicitly support students to make personal sense out of their learning by compelling them to explain, reason, integrate knowledge, question and organize their thoughts. Writing also helps them become more metacognitive and self-directed in their learning.

### Results in the classroom

The *Incite!* model was implemented in a 7th grade social studies pilot classroom in Illinois. Following the exercise, the teacher reviewed the students' *Thought Sheet* writings from the perspective of metacognition, connections, and discussion and reported her surprise at the sophistication of each students' thinking (Figures 10 and 11).

Figure 10

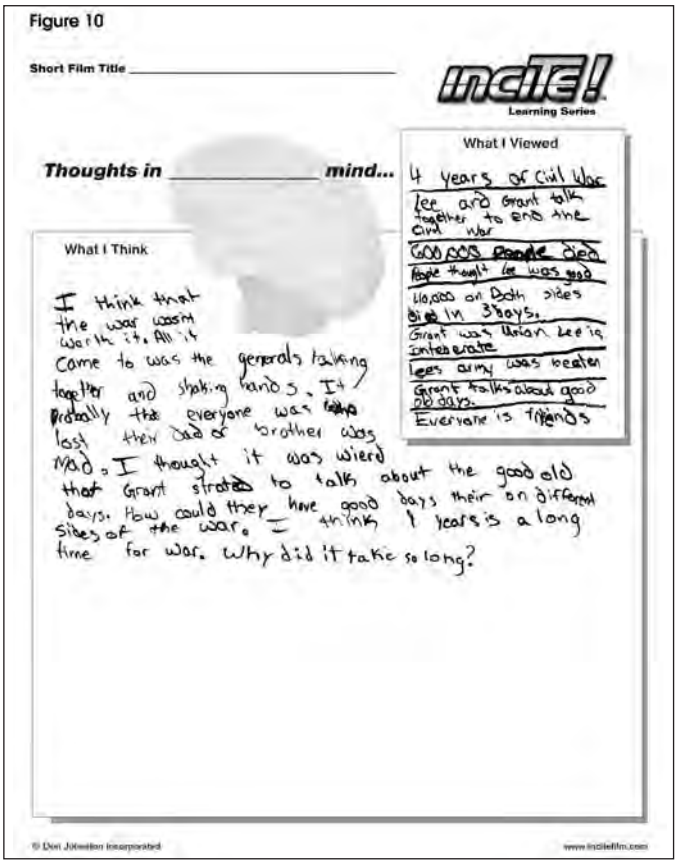
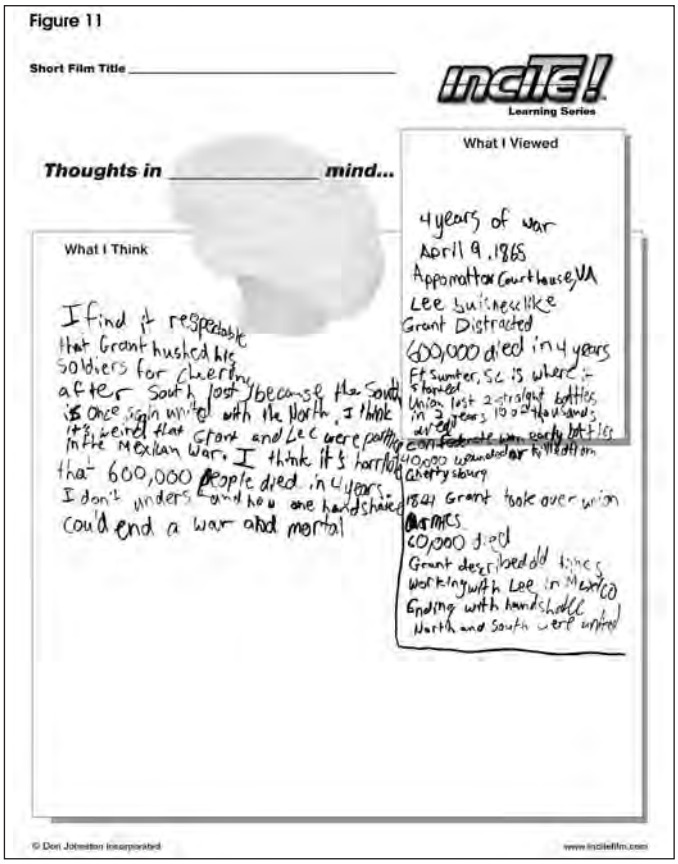



Figure 11




Remarkably, two students wrote very similar passages in their *Thought Sheets* even though one student is considered a "struggling student" and the other "gifted" by the teacher. Even though students struggle with certain academic tasks, i.e., reading or writing, their thought processes are often on par with their peers.

## Conclusion

Students are failing to adequately engage and learn in the content areas for a combination of reasons including diverse levels of engagement, prior knowledge and ability, and the over-reliance on stand-and-deliver instruction. In response, Don Johnston Incorporated developed an approach that frontloads the core curriculum with short original anchor films and collaborative learning strategies. The approach shows promise for significantly impacting learning and engagement deficiencies evidenced in today's classrooms of diverse ability students.

The company's *Incite! Learning Series* is a supplemental instructional program designed to enable individual teachers to anchor the curriculum for every student regardless of ability or level of knowledge. The program establishes a foundation of common background knowledge and helps students connect what they are learning to what they already know. Teachers can increase engagement by having students learn together, participate in purpose-setting and connect classroom assignments to real-world learning experiences.

Most importantly, the approach's combination of anchored and collaborative learning instruction enables students across a wide range of abilities (including mainstreamed special needs and ELL students) to acquire the same knowledge, thinking and reasoning skills, and to participate meaningfully in shared learning activities.

The approach is easy to implement, enabling teachers most comfortable with lecture mode to implement meaningful, time-efficient instruction that is student-led. That said, the fidelity of the *Incite!* approach depends on each teacher developing his or her discussion facilitation skills.

The *Incite! Learning Series* facilitates differentiated instruction by organizing materials, processes, assessments and learning in ways that address individual student needs based on ability, interest and prior knowledge. The discussion-based approach should also facilitate improved reading and writing skills in the content areas as improved understanding can contribute to higher achievement in reading and writing[25] (Applebee et al).

## Sources


[1] Donahue, Patricia L., et al. United States. Dept. of Education. *The NAEP 1998 Reading Report Card for the Nation and the States (NCES 1999-500).* Washington: GPO, 1999a. <http://nces.ed.gov/programs/quarterly/vol_1/1_2/3-esq12-a.asp>.

[2] Kamil, M. "Adolescents and Literacy: Reading for the 21st Century." *Alliance for Excellent Education* Nov. 2003: 4.

[3] Guthrie, J. T., S. Alao, and J. M. Rinehart. "Engagement in Reading for Young Adolescents." *Journal of Adolescent & Adult Literacy* 40.6 (1997): 438–46.

[4] Barnett, L., and R. Greenough. "Regional Needs Assessment 2000: The Evolving Context for Teaching and Learning in the Northwest." *Northwest Regional Educational Laboratory* 30 Nov. 2000: 1-34.

[5] Biancarosa, C., and C. E. Snow. "Reading Next—A Vision for Action and Research in Middle and High School Literacy: A Report to Carnegie Corporation of New York." *Alliance for Excellent Education* 2nd ed. (2006): 11.

[6] Vacca, Richard T. and Jo Anne L. Vacca. *Content Area Reading: Literacy and Learning Across the Curriculum*. Boston: Allyn & Bacon, 2004.

[7] Beck, I. L., and M. G. McKeown. "Social Studies Texts are Hard to Understand: Mediating Some of the Difficulties." *Language Arts* 68.6 (1991): 482-90.

[8] Hasselbring, T. S., and L. I. Goin. "Literacy Instruction for Older Struggling Readers: What Is the Role of Technology?" *Reading & Writing Quarterly* 20 (2004): 123-44.

[9] Marzano, Robert. *Building Background Knowledge for Academic Achievement: Research on What Works in Schools.* Alexandria, VA: Association of Supervision & Curriculum Development, 2004.

[10] Lee, C. D. "Literacy in the Academic Disciplines and the Needs of Adolescent Struggling Readers." *Voices in Urban Education* 3 (2004): 14-25.

[11] Bintz, W. P. "Exploring Reading Nightmares of Middle and Secondary School Teachers." *Journal of Adolescent & Adult Literacy* 40.6 (1997): 12-26.

[12] Alvermann, D. E. "Effective Literacy Instruction for Adolescents." Executive Summary and Paper Commissioned by the National Reading Conference. Chicago: National Reading Conference (2001): 24-25. <http://www.coe.uga.edu/lle/faculty/alvermann/effective2.pdf>.

[13] Torgeson, Joe. "Transcript from Reading Disabilities, Reading Difficulties, and School-Based Interventions that Work: A Forum." Washington: Albert Shanker Institute, 2005.

[14] Guthrie, J. T., and A. Wigfield. "Engagement and Motivation in Reading." *Handbook of Reading Research*. Vol. 3. Ed. M. L. Kamil, et al. Mahwah, NJ: Erlbaum, 2000. 403-22.

[15] Zimmerman, Barry J., Albert Bandura and Manuel Martinez-Pons. "Self-Motivation for Academic Attainment: The Role of Self-Efficacy Beliefs and Personal Goal Setting." *American Educational Research Journal* 29.3 (1992): 663-76.

[16] Bransford, J. D., A. L. Brown, and R. R. Cocking. *How People Learn: Brain, Mind, Experience, and School*. Washington: National Research Council, 2000.

[17] Hasselbring, T. S. "The Use of Anchored Instruction in Literacy". Technology Reading and Learning Diversity (TRLD) Conference. San Francisco, CA: 27 Jan. 2006.

[18] Bransford, J., R. Sherwood, and T. Hasselbring. "The Video Revolution and its Effects on Development: Some Initial Thoughts." *Constructivism in the Computer Age*. Eds. G. Forman and P. B. Pufall. Hillsdale, NJ: Lawrence Erlbaum Associates, 1988. 180+.

[19] Bransford, J. D., A. L. Brown, and R. R. Cocking. *How People Learn: Brain, Mind, Experience, and School*. Washington: National Research Council, 2000.

[20] Rieth, Herbert J., et al. (2003). "An Analysis of the Impact of Anchored Instruction on Teaching and Learning Activities in Two Ninth-Grade Language Arts Classes." *Remedial & Special Education* 24.3 (2003): 173-84.

[21] Wade, S. E., and E. B. Moje. "The Role of Text in Classroom Learning." *Handbook of Reading Research*. Vol. 3. Ed. M. L. Kamil, et al. Mahwah, NJ: Erlbaum, 2000. 609-27.

[22] Nystrand, M., et al. *Questions in Time: Investigating the Structure and Dynamics of Unfolding Classroom Discourse.* Albany: National Research Center on English Learning & Achievement, University at Albany, 2001.

[23] Harvey, S., et al. "Content Area Conversations: Strategies that Build Understanding and Community." International Reading Association Convention. Chicago, IL: 3 May 2006.

[24] National Institute of Child Health and Human Development. *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. Washington: GPO, 2000.

[25] Applebee, A. N., et al. "Discussion-Based Approaches to Developing Understanding: Classroom Instruction and Student Performance in Middle and High School English. *American Educational Research Journal* 40.3 (2003): 685-730.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