



Vertical Teaming for Critical Thinking

SUMMARY

Through the use of Vertical Teaming, teachers in a Washington County district are finding success helping students of all abilities develop the critical thinking skills they need to survive — and thrive — in tomorrow's world.

This article addresses recommendations 1, 2, 4, 6, and 7 of the “Reading Next” and recommendations 1, 3, 4, and 8 of the “Writing Next” reports of the Alliance for Excellent Education and the Carnegie Corporation of New York. (See pages 95-96 and 98)

“Teaching isn’t what it used to be.”

Kids aren’t what they used to be ...” How many times have we heard that common lament in the faculty room regarding the current state of our youth? Each year Beloit College publishes a “Mindset List”¹ for their incoming freshman (our most recent high school graduates), and the compilation puts a lot of these “changes” in perspective. How so? Well, here are some examples from this year’s list:

- The Green Giant has always been Shrek, not the big guy picking vegetables.
- They have never had to “shake down” an oral thermometer.
- They have never used a card catalog to find a book.
- Text has always been “hyper.”
- Students have watched wars, coups, and police arrests unfold on television in real time.

- Everyone has known the evening news before the Evening News came on.
- American students have always lived with the anxiety of high-stakes educational testing.
- There has always been a computer in the Oval Office (McBride & Nief, 2009).

This paradigm shift does not even take into account the cultural swing of current students to cell phones, texting, social networking, blogging, Internet access, iPods, apps, and widgets, or the fact that PDA doesn’t refer to kissing in the hallways any more, but to a Personal Digital Assistant. Our students are published authors on Wikipedia, Twitter, and blogs; film producers, actors, and directors on YouTube; and musicians creating and recording in their own personal computer studios. No wonder they’re different. But are we? And subsequently, how can we change as individual teachers to reflect this kaleidoscopic

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world? Is being able to read and write enough when students are not only being shaped by the onslaught of text and images but also shaping others by what they create and contribute?

In today's world, sending high school students out with basic reading and writing strategies for the English language is not enough for their survival, much less their potential to thrive. So, as educators we first need to agree on what being "literate" means. Typically, literacy has been defined as the ability to read and write (Merriam Webster, 2007) and often in this country has been measured by the ability to comprehend newspaper articles (written at about a fifth-grade reading level), although there has never been a universal definition or standard. Within the last few years a new thinking has emerged, reflected in organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO)², which has drafted a much broader definition of the term to include:

the ability to identify, understand, interpret, create, communicate, compute and use printed and writ-

ten materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society (2004).

Our students' participation in the broader media of our society and their individual achievements are directly impacted by an inundation of information from friends, parents, teachers, community, television, magazines, billboards, the Internet, pop-ups, and advertisers. Their world is a blur of incoming data — written, oral, and visual — which influences their self-image and world view. It is now imperative that the "front lines" of education regroup to meet this shape-shifting educational landscape. The question is, how?

First, we must incorporate critical thinking skills and strategies into the literacy standard with an emphasis on the ability to interact, analyze, evaluate, and synthesize the information that students encounter, as well as produce.

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We must recognize the pressing need to integrate these essential skills, so we may move forward with a plan to achieve our literacy goals.

Critical thinking has been identified as one of the requisite survival skills of the 21st century. Therefore, as educators, we need to teach students to think critically, gather information, evaluate worth, ponder implications, imagine solutions, and reflect on new ideas and alternate outcomes. According to Richard Hersh, “The kind of learning we need stimulates the imagination and teaches how to construct meaning and make disparate information coherent.” We must intentionally instruct our youth not to merely read or passively absorb the words they see, but rather to effectively “chew up,” dissect, and reassemble the information they consume — question, challenge, comment, reflect — and become active participants and contributors to the process, partnering with the originator.

Next, we must formulate a strategy. The Critical Thinking Community³ states, “Critical thinking is the art of taking charge of your own mind. Its value is simple: If we can take charge of our own minds, we can take charge of our lives” (Rusbult, 2001). So how do we teach our youth to “take charge” of their learning? Teachers at Cambridge Central School in Washington County have found success in adopting the critical thinking

standards set forth by the College Board. Teachers created a Vertical Team to teach, reinforce, and broaden those skills.

What is a Vertical Team?

Vertical Teaming is the practice of establishing a team of different grade-level teachers in an academic area to communicate, cooperate, design curricular change, and create support structures to encourage high achievement by all students. Since this model was adopted, teachers from multiple districts in grades 6 through 12 have participated in Vertical Teaming workshops (ranging from one-day sessions to weeklong summer institute seminars). These experiences fostered an understanding of critical thinking skills that could be incorporated by all participants. According to the faculty study group at Drake University (2005):

Critical thinking is not learned automatically ... students must be taught/learn to think critically, to do some of their own research, and to communicate their new knowledge (Cairns et al).

The acknowledgment that we must take hold of the expected outcomes has led our teachers to work together to form a fluid curriculum. They have developed the materials to offer embedded instruction in the necessary critical thinking skills, to create a “common language” across grade levels,

and to scaffold the framework needed. This new ELA construction has directly impacted our approach to reading and writing, the building blocks of literacy.

Reading and Critical Thinking

Past research by Mayer et al. (1999) has shown that there are three types of readers:

- Those who pass over the words without gathering facts or remembering much information;
- Those who remember many facts and details but are unable to apply what they have read; and
- Those who identify and remember the main ideas and are able to apply what they have read to new situations (cited in Cairns et al., 2005).

Clearly, we hope to teach students to become the third type of reader — selecting information, organizing, and integrating new information with what they already know — before they launch into the world-beyond-high-school. Mayer et al. (1999) discovered that this type of reading “improves short-term memory; organization improves understanding and long term memory; and integration and reflection improves the ability to apply the information” (cited in Cairns et al., 2005). Teachers at Cambridge reviewed this desired outcome and incorporated the skills for close reading through their

Vertical Team. This model teaches students to interact with the text, to comment, to question and to analyze, and provides the key ingredients to move first- and second-level readers to the third stage. It provides classroom practices of modeling, discussion, and Socratic learning to foster these higher-level skills. Students have begun to read more carefully, knowing they will be called upon to discuss and defend their thoughts. It also creates a forum in which traditional texts and readings may be challenged and new thoughts may arise without creating anxiety in students of being labeled “wrong.” Students will learn that “with evidence” their interpretations are valid and real.

But the ultimate test occurred this year in a high school self-contained special education English class. When students began to learn how to “close read,” think about what they were reading, respond and interact with the text, one student put down her head and refused. “I don’t want to,” she admonished her teacher. “I’ll never use this stuff.”

“Untrue” her teacher responded to this expectant teen mom. “You may not choose to read this kind of literature after high school but you will use these skills every day, whether selecting a car seat for your soon-to-be-arriving baby, deciding on your first car or which bank to apply to for a mortgage;

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METHODOLOGY

Steps to Creating a Vertical Team

L

Learn more about Vertical Teaming

ask questions, identify needs, look at successful models and demonstrations

A

Assess regional supports

teacher unions, Teacher Centers, BOCES and professional organizations

D

Develop building and district support

engage teachers, administrators, students, their families, and the community

D

Determine goals and implement a multi-year action plan

including evaluation tools aligned with district efforts

E

Evaluate progress

regularly and systematically, using established benchmarks

R

Reflect on practice

strive for continuous individual and team development

you will need to be able to pay attention to the details you read and hear, discover the similarities and differences, incorporate new information, evaluate fact from fiction, assess the tone, and make an educated decision — that is what we are practicing.”

The student picked up her head and started participating.

Writing and Critical Thinking

Whether texting, blogging, digging, or tweeting on their own time, or authoring a multi-page research paper at school, students need to be able to bring together an array of information and synthesize it into a cogent argument. This, too, teachers at Cambridge have sought to address through their Vertical Team model. Incorporating the critical thinking skills necessary for successful reading has also warranted a reevaluation of the writing model. Students’ development of close reading skills has led them to a higher level of writing.

They now interact with texts, questioning, commenting and annotating as they read and they realize that each author has an audience and purpose. It has helped them bring a more focused approach to their own writing; leading them to identify and integrate their purpose and use thoughtful diction and syntax choices to enhance their meaning. These gains have been made using a systematic,

fluid approach: linking concepts and skills through grade levels, building on previous success and mastery, or reteaching and reinforcing previously introduced but yet-to-be-mastered outcomes. This is fundamental to the Vertical Team approach.

This year, we, as teachers, started to critically reflect on this emerging process; we noticed several positive changes in students. Both the 10th- and 11th-grade teachers noticed the following growth in our incoming students:

Their awareness of diction and syntax, as well as their willingness to take risks and attempt to analyze the author’s purpose is refreshing. We’re not there yet, but we are beginning to see the fledgling fruits of the process with a lot less plot summary and students really starting to stretch and work their “brain muscle” before they engage in speaking or writing.

They also evidenced this trend last year on the 9th- and 10th-grade final exams.

It wasn’t until the end of the year that we could see all the little pieces we had been developing fall into place. For some students it created an almost complete puzzle picture; for others the “edge pieces” were in place and they had the rest to fill in as they developed more skills.

Vertical Teaming: A Developmental Approach

We have found that the developmental nature of Vertical Teaming across multiple grade levels (including elementary school) is crucial to its success with all students. We all have had a variety of student styles and abilities in our classrooms — those who are way ahead of the curve, those who move comfortably with the pack, and those who struggle to keep up. Teachers in a Vertical Team develop critical thinking skills in all learners, at all levels. This challenges the “high level” student to incorporate analytical thought and synthesize material earlier, empowers the average student to acquire skills methodically, and supports the struggling learner, allowing them to benefit from the skills presented and modeled over a longer period of time — the years that they travel through the vertical scaffold. This multi-level approach meets the different needs of different learners, based on their preparedness as they move through the developmental continuum. Most importantly, it does not leave any students on the outside of the process. In short, it promotes differentiated instruction for varied learners while allowing them all to reach for the same educational “brass ring.”

Real learning takes time; there is no “quick fix.” Hence, this redesigned platform and vertical team was proposed with a three-to-five-year implementation timeline, with the first

reporting due at the end of the third year; allowing the incoming (then ninth-grade students) to travel through the 9th and 10th grade curriculums as well as choose between the regular 11th grade with NYS ELA or our school’s offering of AP Language and Composition. We are currently in our second year and, due to the purposeful nature of the design, we are looking forward to the next year when the first-year cohort will take their exams. At the close of the first three-year cycle we will look to NYS ELA passing and mastery scores, AP enrollment numbers, and AP scores as compared to SAT or PSAT verbal scores, as well as anecdotal recordings. We believe that we will see, based on current observations and beginning trends, that more students will see themselves as capable learners, participants, and creators willing to engage in higher level courses or perform exceptionally well in regular coursework. We also believe students will incorporate and generalize their critical thinking skills and strategies across curricular areas and content information, allowing them success in multiple areas.

Developing a Professional Community: Supporting Each Other

Our students are not the only ones who need support. The teachers at Cambridge, as they embarked on this path, realized that they too needed advice, feedback, discussion, and sup-

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*Artwork by Will Thomas,
11th grade student,
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of the artist*

port to better serve students. In addition to the vertical model, we needed the grade-level-to-grade-level dialogue to resolve dilemmas and share ideas. We worked to develop a network for our teachers with other local districts that share our interest in this model, encouraging dialogue, opening up professional development opportunities, and weaving a strong web of best practices. This summer we hope to continue on this journey by broadening the learning community to include other disciplines within our programs. Critical thinking across the curriculum (as established by Longview Community College in Kansas City) aims for “an application of logical concepts to the analysis of everyday reasoning and problem-solving” (Miller & Connelly, 1996). We believe that if all curricular areas come “on board,” even if it is one at a time, and students are applying these skills in multiple areas, we will produce a generation of critical thinkers. It is a challenging but attainable goal.

We are not alone in this effort. There are trailblazers who have gone before us and existing networks we can tap into that will support our work. By connecting with them we can exponentially increase the range of possibilities available to us. In this instance, Cambridge forged a collaborative partnership with New York State United Teachers, the Greater Capital Region Teacher Center and the Washington-

Saratoga-Warren-Hamilton-Essex Board of Cooperative Educational Services (BOCES) to begin to further develop Vertical Teaming capacity throughout our area. This initiative will foster continued Vertical Team development at Cambridge, as well as provide mutual support between Cambridge and neighboring districts within our region.

Conclusion

In each district, in each state, there are unique circumstances that preclude a one-size-fits-all approach. But no matter where we teach or what our community standards are, we must first talk. Then we must collaborate and plan. Finally, it is up to us — the teachers on the front lines — to lead educational reform and institute the changes we are looking for in the classroom itself. And as we see the impact of our implemented strategies on our students, we can participate in a professional learning community to offer support, best practices, and advice as we continue to travel along our own learning paths.

In this media-saturated world, where vast resources of information remain untapped and unbridled in cyberspace, we must prepare our students to navigate, participate, and contribute as effective thinkers. We must arm them with critical thinking skills as the requisite tools of inquiry and functioning in modern society. We must make them

critical readers and writers as they absorb and contribute to this fluid informational landscape. It is imperative that we underscore the importance of literacy as a life skill. Critical thinking has become critical literacy, and is no longer the privilege of the educational elite or academically gifted. It is essential for teachers to supply these tools in the survival kit we provide every student who crosses our threshold.

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ENDNOTES

- ¹ The complete 72-item Mindset List can be found at www.beloit.edu/mindset/
- ² Information presented at an international expert meeting in June 2003 at UNESCO
- ³ The Critical Thinking Community was developed as part of The Center for Critical Thinking, established in 1980 by Dr. Richard Paul. Dr. Paul is considered one of the founders of modern critical thinking and is internationally recognized for his contributions to the field.

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