Just for the ASKing!

by Bruce Oliver

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What in the World Were You Thinking?

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The question that is the title of this newsletter usually accompanies a reprimand when someone makes a mistake or demonstrates a lack of good judgment. I prefer an alternate interpretation, one in which the question is posed not in anger or frustration, but in a tone that is friendly, high-spirited, and is simply a way that a teacher can explore the different ways that students were putting on their proverbial thinking caps. It is a question, perhaps reframed in different words that teachers should be posing often and with enthusiasm as they learn what is on students' minds and how they think.

There is no more important role that an educator undertakes than to teach students to be critical thinkers. Simply imparting factual knowledge or checking off standards as the school year progresses will not send students off into the world ready to face 21st century challenges. The teacher's job is not complete until she creates opportunities for learners to wrestle with tough issues, bounce ideas off their peers, explore topics and concepts more deeply, and be able to say, "I really put my brain to work today!" Actions teachers can take to create an environment where thinking is a predominant part of a student's day are outlined below.

Self-Awareness

Our days in the classroom are jam-packed with tasks that must be accomplished, and sometimes we can find ourselves on automatic pilot as we go through the day. Because of the often hectic pace, we may not even be aware of what may be missing from our lessons. It is important to take the time to reflect on certain aspects of our teaching practices, especially those that challenge students to think more deeply. At the forefront of our thinking should be the question:

How will I build in opportunities for students to make real world connections and to learn and use the rigorous and complex thinking skills they need to succeed in the classroom and the world beyond?

Because it is such an essential part of teaching and learning, Just ASK's publications and consulting work include a focus on developing thinking skills across the board. For example, Paula Rutherford's ***Instruction for All Students*** includes a **Self-Assessment on 21st Century Thinking Skills** (Access Tool 45 at www.justaskpublications.com/in4alltemplates/) that enables practitioners to determine their current status with the art of questioning and also add practices that refine and expand their own thinking.

Good Planning

When I have the opportunity to visit classrooms, I am glad to see teachers asking students questions to check for understanding or to promote deeper thinking. The teachers in these classrooms have become accustomed to making note of questions that will challenge students' thoughts processes as they are planning their lessons. They do not simply rely on fact-based questions, or questions that occur to them in the moment as a lesson unfolds. As well, these accomplished educators have developed repertoires of ways to ask stimulating and intriguing questions that fit numerous learning situations. Powerful question starters include the following:

- Based on what you know, what can you predict about…?
- How does this tie in with what we have learned before?
- Can you think of another way we could do this?
- How does this compare with…?

Access over two dozen question stems that promote student thinking at www.justaskpublications.com/altemplate.

Instructional Delivery

Some students feel that teachers "know everything," and that solving complex problems is easy for them. A good strategy to use to dispel this myth is **Modeling Thinking Aloud**. This tried and true strategy, introduced by Beth Davey in 1983, is described in several Just ASK books and on multiple educational websites. The steps in the process, as explained in a document from the West Virginia Department of Education website, are:

- Begin to read a text aloud, stopping to express your thoughts about what you are reading. You might vocalize the following:
  - Connections to your life, to other texts, or to the world in general
  - How you derive meanings of unfamiliar words using context
  - How you use clues to make inferences
  - Questions you may have for the author
- You may find that as students catch on to what you are doing, they will offer suggestions for what to do.
- After you have finished reading the selected text, lead students in a discussion of all the activities your brain went through as you interacted with the text.
- You might also tell them that this process is called metacognition - thinking about one's thinking.

Some teachers mistakenly introduce and explain difficult or complex concepts to their students exclusively in an abstract manner, thus leaving some students lost and confused right from the outset. Jon Saphier in his book ***The Skillful Teacher*** presents a teaching strategy that can help students better understand difficult concepts in the **Principle of Learning** he calls **Concrete-Semi-abstract-Abstract**. Saphier writes, "Teachers using this principle use tangible or manipulative materials in the first stage of instruction, move to pictorial representation of the same material, and at still later stage of instruction deal with the same materials with students in purely abstract ways." Originally introduced in mathematics instruction, this strategy should be moved to center stage across all content areas because the concrete to representational (pictorial) to abstract method scaffolds learning, and students are thereby able to gain a firmer grasp of constructs and concepts.

Paula Rutherford's compilation of evidence-based and practitioner-tested strategies in ***Active Learning and Engagement Strategies*** includes an array of ways to build in a creative and critical thinking skills

approach. Included there are **Through the Eyes of**, **Synectics Review**, **In My Mind's Eye**, **Project-Based Learning**, **Connection Collection**, and **Collaborative Controversy** as well as the **Concept Attainment** and **Inductive Thinking Models of Teaching**.

Student Mindsets

Some students come to school with a set of personal beliefs that impede their ability to become deep thinkers. Some learners may compare themselves to other students who seem "smarter," and they are quick to give up; other children simply believe that they are not good at certain things so they may not even make an attempt; still other students are afraid of failing, while others simply eschew any challenge. In some cases, children have not been exposed to lessons that require them to delve more deeply into a concept or idea.

Researcher Carol Dweck has given us the concept of growth mindset, which she defines as the power of believing you can improve. The chart below from Brain, Child Magazine is a powerful illustration of the importance of self-messages to expand one's mindset

What Are You Thinking?

Instead of…	Try Thinking…
I'm not good at this.	What am I missing?
I give up.	I'll use some of the strategies we've learned.
This is too hard.	This may take some time and effort.
I can't make this any better.	I can always improve, so I'll keep trying.
I just can't do math	I'm going to train my brain.
I made a mistake.	Mistakes help me learn.
She's so smart. I will never be that smart.	I'm going to figure out how she does it so I can try it.
It's good enough.	Is this really my best work?
Plan A didn't work.	Good thing the alphabet has 25 more letters.

Thinking and Questioning

Just ASK author and elementary principal Heather Clayton has written eloquently about the art of questioning in two issues of ***Making the Standards Come Alive!*** newsletters. In "The Art of Questioning: The Teacher's Role," Clayton states,

> "Teachers need to be ever so thoughtful in how they are introducing new content and using questioning to deepen students' understanding. As each new piece of learning is introduced, questions help students to process the new content. At the end of each lesson within a unit, students should grapple with ways to summarize the relevance of the learning, make connections to what they already know, and be reflective about what they understand and don't understand."

Clayton also makes the case for improving students' abilities to pose good questions themselves. In "The

Art of Questioning: The Student's Role," she writes,

> "In both English Language Arts and mathematics, students' questions expand their thinking, promote reflection, clarify understanding, and require new ways of thinking about ideas, concepts, beliefs, opinions, problems, and solutions. Ultimately, student questioning helps students monitor their understanding and construct meaning."

Both newsletters are replete with specific examples that demonstrate how teachers and students can build their questioning skills.

Access these issues of ***Making the Standards Come Alive!*** and other archived issues at www.justaskpublications.com/mccca/.

Balanced Participation

Thinking skills are particularly evident during class discussions. Unfortunately, researchers have found that a small percentage of students tend to dominate classroom discourse. It should come as no surprise that the active participants are high performers who graduate at higher rates than non-participants who are typically low performers. McREL's chief executive officer Bryan Goodwin believes it is possible to "restore the balance" during classroom discussions making "invisible students more visible." Goodwin reminds readers of Mary Budd Rowe's 1969 research on **Wait Time**. Rowe discovered that many teachers peppered their students with "rapid-fire" questions barely giving students any time to think. Rowe also learned that too many questions had a right or wrong answer. She concluded that more **Wait Time** was required if teachers truly wanted to elicit mindful responses from students. In later research in 1986, Rowe found that in classrooms with longer wait time, student responses were three to seven times longer as students provided evidence as they explained their reasoning.

Student Tools

The May 2016 issue of ASCD's ***Education Update*** featured an article by Kathy Checkley titled "The Open-Ended Question," Checkley states, "Open-ended questions help students explore possibilities, clarify thinking, and produce evidence-based conclusions." The article focuses on helping students add invaluable skills to their thinking including evaluating multiple solutions to a problem, expanding the use of close-reading strategies, and writing with more clarity in response to a specific task. Students are occasionally asked to demonstrate their thought process in a written response, often to a question that is open ended.

Barbara Kapinus, in the introduction to her article "Preparing Students in Writing Responses to Open-Ended Questions" available on the textproject.org website, writes:

> The new 2015–2016 assessments written by Smarter Balanced Assessment Consortium and the Partnership for Assessment of Readiness for College and Careers both heavily feature questions that require students to provide evidence for their reply. This is a dramatic departure from simple multiple-choice questions where student can guess the best response if they are unsure of the answer. What can teachers do to prepare students for this more rigorous form of testing? How can teachers help students pinpoint the heart of open-ended questions to give the best response?

Kapinus provides a checklist that students can use to determine if their answer is as clear and complete as

possible. Self-monitoring questions students can ask themselves are:

- Can someone who is not sitting next to me understand my response without asking for clarification?
- Does the evidence I've chosen to support my response convince me?
- Is my response thorough and complete? What details can I add to make it stronger?
- Does my response answer the question?

Wishful Thinking

When teachers require deeper thinking on the part of their students, the potential for unanticipated curiosity, surprising creativity, and unimagined discoveries make the learning experiences for students much more engaging and exciting. Imagine the joy when a student comes up with a fresh idea, asks an off-the-wall question that takes the lesson in an unforeseen direction, delves deeply into unassigned personal learning, or when teachers hear students say, "I wish we could have these kinds of discussions more often!" I cannot imagine more satisfying teaching moments!

Resources and References

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