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Fostering Student Questions: Strategies for Inquiry-Based Learning

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Ramsey Musallam's TED Talk on his "3 Rules to Spark Learning" (https://www.youtube.com/watch?v=YsYHqfk0X2A) inspires the need to foster students' curiosity. As educators, we want them to ask questions and explore their ideas, which can lead to a rich inquiry-based classroom. From young children whose mantra for everything is "Why?" to teens that require effective inquiry skills as part of their preparation for successful post-secondary life, this need is high. But our challenge is where to begin. Here are four protocols to help jump-start a culture of fostering student inquiry that, in turn, fosters questions and ideas.

1. The Question Formulation Technique

The Question Formulation Technique (http://www.ascd.org/ascd-express/vol7/713-rothstein.aspx) offers a starting place to teach students how to construct questions that meet their needs. The QFT (http://openingpaths.org/blog/2015/05/question-formulation-technique-empowering-student-inquiry/) is a process for coaching students on the value and pitfalls of closed-ended and open-ended questions, including where and how to use them. Use the QFT as a foundation for the other protocols shared, which can lead to rich learning experiences.

2. Chalk Talk

One challenge to generating substantive questions and ideas is getting every student's voice heard. There are lots of reasons for this, such as strong personalities dominating a conversation, a need for space to reflect, or nervousness with speaking in front of others. Chalk Talk (http://www.nsrfharmony.org/system/files/protocols/chalk_talk_0.pdf) (PDF) is effective because, at its core, it's an engaging conversation that happens in silence. All voices are honored.

1. Post a topic as a statement starter or a question on chart paper for small groups. Or use roller paper that extends ten to twenty feet, so that 20-30 participants can be involved.
2. Participants communicate through writing with markers, asking questions and making comments to the prompt and to each other's posts.
3. Visually, participants create a web of ideas and questions that fan the flames of curiosity.

4. The time frame is approximately ten minutes.

Traditionally, the teacher collects the results at the end to use as data for later activities based on the students' contributions. A variation is to have participants review these collected thoughts to mine for ideas and questions that are further discussed and explored as part of a larger reflective experience. This second option helps students to see how their voices are valued.

3. Say Something

One challenge with reading articles or other pieces of writing is getting students to read for meaning and make connections beyond summary. Say Something (http://teach.oetc.org/files/archives/16.%20Say%20Something%20Protocol_0.pdf) (PDF) is a reading approach where students chunk a reading into smaller pieces, making comprehension easier. They dialog about specific text to uncover deeper understanding. The process ensures that all students participate and get support from each other to gain comprehension without feeling singled out.

1. Divide students into groups of 2-4.
2. Each group decides how far it will read (individually or aloud) before stopping for conversation.
3. While reading, students mark at least three passages. Consider using:
    * A checkmark for a passage that the reader agrees with.
    * A question mark for a quote that the reader does not understand or wants to know more about. Require that students craft at least one question per passage.
    * An exclamation mark for a passage that has new meaning.
4. After the group finishes reading the agreed-on section, the first student shares a passage and why he or she chose it. Then the next student does the same, until everyone has shared. There is no crosstalk about what was said.
5. The group repeats steps 2-4 until the reading assignment is completed.

This process encourages students to express themselves and explore their ideas with a group. Save the Last Word for ME (http://www.nsrfharmony.org/system/files/protocols/save_last_word_0.pdf) (PDF) is a similar protocol, except that when students share a passage, they don't explain their ideas until after each group member has shared his or her thoughts. After the benefit of hearing everyone's contribution, the first person gets the last word.

4. Harkness Discussion

It's amazing what students come up with when the teacher is silent. Often during teacher-led conversations, some students will defer to the instructor rather than take risks with exploring their thoughts. Other students may be content to keep their rich thoughts to themselves, while the discussion is carried by a few.

The Harkness Discussion (http://www.stevensonschool.org/academics/carmel/excellence/harkness_teaching_method/index.aspx) (or Spider Discussion (http://daynalaur.com/assessment/spider-web-discussions-formative-assessment/)) encourages idea generation and reflection. Prepped by a reading assignment, students sit in a circle or square. The teacher asks a question or gives a starter statement prompt for students to launch the conversation. Have students bring prepared questions for what they want to know, to be shared during the discussion. From beginning to end of the group discussion, the teacher remains silent, allowing the students' voices to carry the day.

Another benefit is providing practice with collaboration. Students are charged with encouraging everyone to share their thoughts through collegial support, which practices collaboration. As students discuss the topic, the teacher silently maps the flow of conversation by drawing lines from one speaker to the next. The intent is to capture who contributes and to what depth. After the conversation ends, have the students write a reflection about their understandings and takeaways. The writing provides data about the thinking by those who did not speak -- this time.

No Time to Wait

Teachers at Loudoun County School Division had a thoughtful conversation about the power of sustained inquiry, which is based on questioning skills, and how student reflection was critical to learning. Like many educators, they grappled with the challenge of the seemingly competing needs for teaching curriculum and time for reflection. They recognized that curriculum coverage does not equal student learning. The protocols discussed above encourage development of student inquiry while using proscribed curriculum as the focus -- a win-win for curriculum and time.

Learner proficiency with inquiry leads to sustained and deeper understanding that pays long-term dividends with achievement, which outweighs short-term concerns of content coverage.

Where will you start?

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