ACT for Youth Center of Excellence

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A collaboration of Cornell University, the University of Rochester, and Ulster BOCES

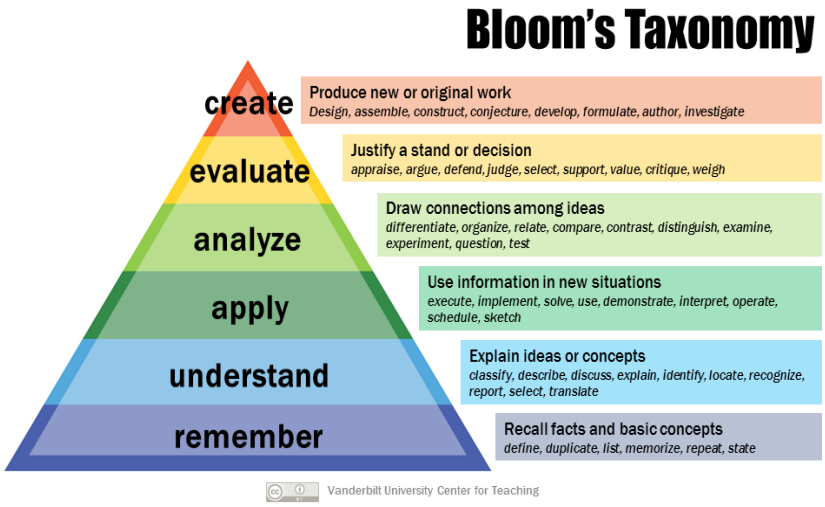
Inquiry-based Instruction: Engaging Youth in Deeper Thinking

by Beth Mastro

When you aim to offer a positive educational experience to young people, are you looking for successful memorization and knowledge acquisition, or something more? How can you set the stage for deeper thinking? Inquiry-based instruction offers educators and facilitators of youth programs an approach that goes beyond simply conveying information.

What is inquiry-based instruction?

Inquiry-based instruction is a teaching strategy that uses questions to shape the context and content for learning, thereby providing students with the opportunity to engage critical thinking skills. Both structured and highly adaptable, the strategy allows educators to accommodate differences among participants: students can delve into the subject area at their own pace, using their own learning style and multiple intelligences.



Graphic by Vanderbilt University Center for Teaching
https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy

Through the thoughtful use of questions, educators can greatly enhance the rigor of the learning experience. Bloom's Taxonomy offers a way to think about different levels of student learning, from basic to higher order

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thinking. Using inquiry-based instruction, educators can prompt student engagement from the first level, "Remembering/Knowledge," all the way to the highest levels, "Evaluating and Creating." Questions guide the student to explore different aspects of the content, and can help support students' reflection and development of personal opinions about that content.

Put into practice, inquiry-based instruction uses distinct types of questions – essential, guiding, and processing – as a framework to encourage thoughtful and meaningful learning.

Essential Questions

Essential questions are "questions that are essential for students to continuously examine so as to come to an understanding of key ideas and processes" (McTighe & Wiggins, 2013, p. 14). Martin-Kniep (2000) described the use of essential questions as an "innovation that works" because "essential questions are compelling. They are universal. They are never fully answerable" (p.3). Based on these two definitions, we can see that the essential question is the "big idea" that the teacher is trying to get across: it is the main point of the learning experience and the question students will come back to again and again.

Resources

Bloom's Taxonomy
Patricia Armstrong, Vanderbilt University Center for Teaching
https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy

Bloom's Taxonomy Cheat Sheet
Francie Kugelman, Bloom's Taxonomy.org
www.bloomstaxonomy.org/Blooms%20Taxonomy%20questions.pdf

Essential questions should be open-ended. They encourage ideas that reach across content areas. They are thought-provoking and engage students in analysis and evaluation, higher order thinking skills that require more than rote memorization and repetition. Within parameters, essential questions allow students latitude to explore based on their own interests. Any answers that arise require support and justification, as there is no single correct answer. These over-arching questions also raise new questions, and should be continuously revisited as new learning takes place.

When working with young people in the context of health, for example, we would identify an essential question that will allow us to return many times within different contexts, such as "What does it mean to be healthy?" This fundamental question can go in many different directions and cover every aspect of the health content and concepts that we may want our young people to explore.

Guiding Questions

Once the big idea is established through the essential question, guiding questions come into play. Guiding questions are "student-centered inquiries that combine functional knowledge and skills and guide students toward the enduring understandings" of a topic, content, or skill area (New York State Education Department, 2005). As the term suggests, these questions guide students to the content that you want them to learn. By asking guiding questions, we help students explore particular content under the umbrella of the essential question. Again, guiding questions point to specific information or skills, but do not necessarily have one correct answer. Rather, they are used to encourage student analysis and require students to support and justify their responses.

For example, under the essential question of "What does it mean to be healthy?" you may be focusing on the content area of nutrition. You might use guiding questions such as "What is a proper diet?" so that students explore healthy eating and nutritional needs. Or you might engage students in learning about the cultural impact on diet with a guiding question such as "Does everyone have to eat the same things to have a healthy diet?" These questions are used to shape the specific areas that you want students to learn about, and prompt them to analyze information in a more concerted way.

Processing Questions

Now that you have shaped the learning experience with a big idea and guided students to discover more specific content and concepts, processing questions are used to check for understanding. These questions ask for specificity and are used to get that one correct answer within the content you are teaching. They seek to ensure that students have gained the critical functional knowledge related to the content you are teaching.

Processing questions can be used for general review ("What have we learned so far?") or specific content review ("What are vitamins and minerals and why are they needed in our diet?"). They also can serve as a bridge to the next lesson or learning experience, which will be driven by the next set of guiding questions, all still under that first essential question. A bridge question such as "Can goal setting help us have the right diet?" might be used to move to a skills-based lesson.

Putting It All Together

We have established our essential question ("What does it mean to be healthy?") and we have focused students' learning on nutrition through guiding questions ("What is a proper diet?" "Does everyone have to eat the same thing to be healthy?"). We have then checked for specific content learning through processing questions ("What are vitamins and minerals, and why do we need them in our diet?"). As we move from supporting students' learning about nutrition to a more skill-based lesson we might ask a processing question focused on planning and goal-setting.

The essential question can be revisited over and over again and can serve to drive many different content and concept areas. Let's look at another example. Here, we use the same essential question about health to consider healthy communities. In this activity, students are asked to walk around the community and make observations from the perspective of health.

Essential Question

- What does it mean to be healthy?

Guiding Questions

- What does a healthy community look like?
- How healthy is our community?
- Are there ways we can make our community healthier?

Processing Questions

- What did you see that told you our community was healthy or unhealthy?
- Did you see trash?
- Did you see a clean sidewalk?

Inquiry-based instruction can shape rich, flexible, and engaging learning opportunities for young people. This strategy does require time and planning on the part of the educator, but it can lead to richer, and more rigorous, student-centered learning. ★

References

Martin-Kniep, G. O. (2000). Becoming a better teacher: Eight innovations that work. Alexandria, VA: ASCD.

McTighe, J., & Wiggins, G. (2013). Essential questions: Opening doors to student understanding. Alexandria, VA: ASCD.

New York State Education Department. (2005). Guidance document for achieving the standards in health education. Retrieved from http://www.p12.nysed.gov/sss/documents/GuidanceDocument4.25.update.pdf

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