“The most important attitude that can be formed is that of desire to go on learning.”

— John Dewey, Experience and Education
Inquiring Minds Want to Know

Using the Question Formulation Technique (QFT) as part of Inquiry-Based Learning

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So how do we avoid this?
How librarians help students avoid “I choose C” responses:

“We are... teaching students how to think, evaluate, interpret, and question... utilizing research and evaluation skills to create products... [with] uses that are real, authentic, and crucial” (Foote 28-31).
AASL Standards state....

Students should use an “inquiry-based process” to “inquire, think critically, and gain knowledge”; “draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge”; and “share knowledge and participate ethically and productively as members of our democratic society” (AASL 2007, 4,5,6)
Age of Data

Inquiry-based research models allow for data to show:

1. Development of information literacy skills
2. Growth of knowledge in curriculum topic
3. Student reflections of interests, feelings and experiences on learning.
5 Elements of Information Inquiry

1. Questioning
2. Exploration
3. Assimilation
4. Inference
5. Reflection
This technique helps students learn how to produce their own questions, improve them, and strategize on how to use them.
Inquiry = Curiosity

Through inquiry students discover:

1. Real questions about academic topics, which blossom into research;
2. Inquiry supports deep understandings within the content of the curriculum; and
3. Allows students to create products worth sharing (Maniotes and Kuhlthau 8-17)
Teaching Multiple Thinking Abilities in One Process

As students go through this process, they practice three fundamentally important thinking abilities:

1. **Divergent Thinking** - the ability to generate a wide range of ideas and think broadly and creatively

2. **Convergent Thinking** - the ability to analyze and synthesize information and ideas while moving forward toward and answer or conclusion

3. **Metacognition** - the ability to think about one’s own thinking and learning (Rothstein and Santana 15-16)
Steps in QFT™ Process

1. Question Focus (QFocus)
2. Rules for Producing Questions
3. Producing Questions
4. Categorizing Questions
5. Prioritizing Questions
6. Next Steps
7. Reflection
Rules for Producing Questions

• Ask as many questions as you can.

• Do not stop to discuss, judge, or answer any question.

• Write down every question EXACTLY as it is stated.

• Change any statement into a question.
Inquiry is learning-centered not product-driven.
Categorizing Questions

**Librarian/Teacher Role**
- Introduce a definition for closed- and open-ended questions
- Support students as they categorize questions
- Facilitate a discussion on the advantages & disadvantages of closed- and open-ended questions
- Support students as they change questions from one type to another

**Student Role**
- Review list of questions they have produced
- Categorize questions as closed- or open-ended
- Name advantages & disadvantages of closed- and open-ended questions
- Practice changing questions from one type to another
Prioritizing Questions

Criteria for choosing
• What students would like to focus on
• What is most important to the students
• What the students can explore further
• What students can use for a specific purpose: conducting an experiment, writing a paper, reading a book

Directions for choosing
• Choose the 3 most important questions
• Choose the 3 questions you want/need to answer first
• Choose the 3 questions that most interest you
Guided Inquiry Design Process

Open
Immerse
Identify
Explore
Create
Share
Evaluate

Kuhlthau, Maniotes, and Caspari, 2012, p. 31
Student use questions to identify topics for research papers, essays, experiments and projects (PBL) then by exploring interesting ideas from their questions, allowing them to look around and dip in.
Curiosity = Authentic Questions

Students who use questioning techniques often:

1. Begin to see authentic purposes for their questions;
2. Ask more questions using higher order thinking skills; and [most importantly]
3. Allow students to tap into their natural curiosity (Ness 76)
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Works Cited


Maniotes, Leslie K., PhD, and Carol C. Kuhlthau, PhD. "Making the Shift From Traditional Research Assignments to Guided Inquiry Learning." *Knowledge Quest* 43.2 (Nov/Dec 2014): 8-17. Print.


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