

The Power of Questioning

Designing Thought-Provoking Questions That Foster Constructionist Learning

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Abstract

This interactive workshop explores the transformative potential of effective questioning as a catalyst for student engagement and a key element in reimagining the curriculum, connecting it more deeply to the lives of learners. Participants will engage in practical activities, learning to craft questions that empower students to develop critical thinking, creativity, exploratory skills, and a sense of inquiry about the world around them. The workshop emphasizes how strategic questioning fosters active, engaged, and informed participation in situations and decisions that impact students' lives. Grounded in the understanding that questions are fundamental to the teaching-learning process and crucial in all stages of Creative Learning, the session focuses on developing effective questions that promote constructionist education within regular classrooms.

Keywords and Phrases: creative learning, thought-provoking questions, contextualization

1. Workshop Description

1.1 Scope, Motivation, and Background

There is a growing recognition of the importance of developing students' higher-order thinking skills, both for their academic success and for them to thrive in their personal and professional lives. Examples of such skills include critical thinking, evaluation, and analysis (Bloom, 1956; Anderson & Krathwohl, 2001). In addition to Bloom (1956) and Anderson & Krathwohl (2001), many other authors address the art of questioning in the classroom and its positive impacts on learning, such as Blosser (2000), Paul (1993), Elder & Paul (2007), and Ritchhart, Church & Morrison (2011). In this context, the art of formulating good questions emerges as an essential element in designing learning experiences.

Blosser (2000), in the article "How to ask the right questions?", not only provides a possible cycle for improving questioning skills but also offers extensive reflections on the formulation of questions used in the classroom. She argues that effective questioning is fundamental to teaching and learning, serving not only to check memorization but also to stimulate exploration and the construction of knowledge. The author



emphasizes the importance of varying the types of questions, prioritizing those of a higher cognitive level to promote critical thinking, and highlights that timing and clear, thought-provoking wording are essential. The article also underscores the need to allow adequate time for responses to emerge and to use student responses constructively to deepen discussion and encourage them to formulate new questions.

Paul (1993) and Elder & Paul (2007) reflect on the contributions of Socratic questioning, characterized by inquiries that challenge assumptions and encourage critical reflection, representing a potential approach to fostering dialogue and deep analysis – essential elements for developing higher-order thinking skills.

To make thinking visible in hands-on learning experiences, Ritchhart, Church & Morrison (2011) discuss the contributions of effective questioning and facilitating structures called “Thinking Routines,” which are directly related to the kinds of thinking we seek to value and promote in the classroom.

We understand that effective questioning can be both a powerful tool for formative assessment and a means of deeper engagement with the subject matter for meaningful learning. By grounding lesson planning in questions that stimulate critical and creative thinking, agency, problem-solving, careful observation, argumentation, and the expression of ideas, we contribute not only to the development of higher-order skills but also to student engagement and agency, awakening and sustaining students’ interest in learning. We believe that good questions can significantly enhance the teaching and learning process, adding context, depth, meaning, and significance to the curricular topics addressed. Given this importance, this workshop aims to explore strategies for formulating questions that contribute to promoting constructionist learning in the context of regular education, understanding that good questions are essential for constructing powerful ideas, driving students to engage with the proposed topic in an exploratory and investigative manner (Papert, 1980).

Based on the previously mentioned references and other complementary ones, we propose this workshop to reflect on the power of questions as catalysts for student engagement and allies in addressing the curriculum more meaningfully. We will discuss practical strategies for creating questions that stimulate critical thinking, creativity, investigation, and curiosity, thus connecting curricular content to students’ lives and individual interests. The references on effective questioning will be considered in light of the minimal structures of constructionist learning experiences; that is, we will discuss how to formulate questions that contribute to mediating the different moments of a Creative Learning experience, encouraging student agency throughout their educational journey.

Recognizing the significant contribution of questions to contextualize, deepen, and add meaning to curricular topics, the workshop will explore question formulation strategies applicable to both teachers and students, with the goal of promoting constructionist learning in formal education. We will reflect on how a question-driven lesson plan can cultivate higher-order skills, along with increased student engagement, problem-solving skills, observational skills, argumentation skills, and self-expression. Ultimately, the workshop seeks to empower participants to develop and use their frameworks for question formulation to guide open project work.

We will adopt the homology of processes (Schön, 2000) throughout the workshop: participants will collaboratively work on creating projects – specifically, creating frameworks for formulating good questions – based on their teaching interests and in an atmosphere of exploration and idea experimentation. The workshop will require the use of paper for notes, post-its, pens, pencils, and markers for idea recording, as well as a whiteboard, flipchart, or poster board for each group for visual organization. The presentation of concepts and facilitation of communication will be supported by a multimedia projector and sound equipment, while group work will be optimized by providing five tables capable of seating four people each and twenty chairs, along with one table for material distribution and another for multimedia equipment.

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