Clarity and Cooperative Learning: The Concrete-Abstract Connection

By Frank Lyman
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The west was wild and woolly, which is just what no teacher wants the classroom to be. In fact, most classrooms are woollier than they are wild, and it is the woolly (unclear thinking) that can create the wild (unfocused behaviour) all of which is as much to say that a prerequisite of orderly cooperative learning is clear thinking, by teacher and students.

To clarify, let's get clear about clear. Clarity in thinking may be defined as having or communicating an understandable or logical connection between an example and an idea, between the concrete and the abstract. This is the coherence dimension of clarity.

Thinking or task prompts for which the student has nothing more concrete to which the prompt can cohere, set the student cognitively "adrift." For instance, young students may have no concrete understanding of terms like "topic sentence," "literary experience," "main idea," "realistic fiction," "detail," "linking verb," "author's purpose," "hypothesis," "division," and even "sentence"; and older students no true concept of "analysis," "synthesis," "summarize," "syntax," "theme," "define," "character trait," "essay." Even if they once had concrete "anchoring" for these concepts, they might not be able to understand them in the midst of classroom discussion or testing. The thesis here is that much of what goes awry in cooperative learning, in large group discussion, independent work, and on assessments can be traced to unclear prompts, or for sake of emphasis, "wooly," incoherent thinking and communicating. The concepts simply aren't cohering to the proper examples in the students' minds and hence they can't practice or apply what they don't understand.

The solution to the problem of "cognitive drift" is to "anchor" all concepts to less abstract and more familiar ideas and examples, and of course to teach the concepts through multiple examples in the first place. For instance, if using the term "hypothesis," the teacher anchors, or connects, the term to the more familiar "cause-hypothesis." Instead of, or with, "detail" the teacher uses "event" or "example." In preference to asking students what something means, or to define, the teacher asks for and/or give examples. If students are to write "sentences," they should know that this requires

them to visualize and then to create a "word picture," not simply to end a few words with a period. If students are being asked to "divide," the teacher uses language which gives a concrete image, i.e., "How many sixes are in thirty-six," not "thirty-six divided by six."

Once a teacher thoroughly understands how to anchor abstract thinking questions, or prompts, to more concretely understood concepts such as cause/effect, similarity, difference, example to idea, idea to example, and evaluation (the ThinkTrix); students will know how their minds should work to answer the question. This constitutes a form of "metacognitive anchoring." This understanding should be coupled with the teacher's unwillingness to use highly abstract, adult language. When these two principles and related practices are combined with adequate time for independent thought, particularly in writing (written wait time, or response writing), and worthwhile or intriguing problems to consider, cooperative learning can truly function as it is designed to—as an experience of shared cognition. The secret to successful cooperative learning is to combine it with its allies: concreteness, metacognition, independent thinking, written or visually organized response, curiosity stimulation, and relevant content. Such a classroom will be neither wild nor wooly.

On the wall of every classroom, grades one through twelve, should be these questions for all participants in the learning culture:

"How should my mind work
to answer the question,
solve this problem, do this task?"

"Do I really understand what I am doing?"

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