

Teaching Concepts

Suggested Instructional Strategies Which May Promote Active Learning for All Students

Following is a partial list of suggest teaching and learning strategies which promote deeper understanding:

Essential Elements of Instruction - These "essential elements" are very basic components of any form of effective instruction. For example, the objective must be clear and all instruction must be directed toward it whether in cooperative learning situations, with integrated activities, or in applying didactic or constructivism methodology. Similarly, if students are to learn in any of these formats, there must be active participation by most of the students most of the time. The objective itself must change depending on the situation. The form of participation may vary, but participation is an essential part of all learning. This variation applicability is true for each of the essential elements of instruction.

Collaborative Learning - This is a strategy in which learners assist each other in overcoming or dealing with obstacles to learning. Learners may or may not be working on the same assignment, problem or project, but they are helping each other learn.

Cooperative Learning - During cooperative learning students work as a group to achieve a common goal. They may each be working on different parts, but there is individual accountability, and the final product will be assessed on the basis of the achievement of that common goal.

Teaching for and About Thinking - Teaching for thinking means creating and nurturing a learning environment which promotes and provokes thinking. Teaching about thinking means using thinking as the topic of a learning experience. This may include how the brain works, or being conscious of our own thinking as we problem solve (metacognition), or thinking from various perspectives; e.g., how an artist might view a problem as compared with how a scientist might view the same problem, or how do poets think when they write.

Teaching for Multiple Intelligences - This involves instruction which promotes and provokes learning in a variety of ways. Learners possess many ways of knowing or learning, but they often have areas of strength or preference in how they learn. Instruction must provide opportunities which capitalize on those strengths, but also improve areas of weakness.

Integrated Learning - This is the forming of natural connections across content and concepts which deepens understanding; it is an integrative way of knowing.

Constructivism - This is the theory that knowledge is not passively received, but actively constructed on a base of prior knowledge, attitudes and values. Learners need to create through exploration, investigation and discover patterns, schema, strategies and rules that promote understanding.

Scaffolding - This is the set of strategies by which the teacher provides a framework or support system for students as they construct meaning. The level of instruction remains high. In beginning a new learning, the teacher provides support as needed through lots of modeling, guided thinking aloud, questioning, and other cueing techniques. The student guides the learning. As students cycle through the process and become increasingly proficient, scaffolding decreases until students are independent.

Learning Cycle - This is a framework for providing repeated, active inquiry to assist students in building their own knowledge.

A **learning cycle** may take any of several forms as long as it:

1. previews student's prior knowledge
2. gives students schema or framework on which to hang new knowledge
3. provides opportunities for students to actively explore and develop new concepts
4. provides opportunities for student to apply learnings to new situation

Graphic Organizers - such as concept maps, flow charts, T-charts and other organizational frames provide effective visual support in helping students organize and interpret information. Visual support provided by graphic organizers also makes effective tools for students learning English as a second language. Graphic organizers are a useful method of evaluation student understanding.

A **graphic organizer** often used by primary teachers is a KWL chart. The three columns are K - W - L -

Topic

K - What do we already know? **W** - What do we want to find out? **L** - What have we learned?

Older students find a modification in the "Need to Know" chart.

Issue

What do we know?

What do we need to know?

How can we find out?

Students may also list assumptions or hunches on the back of their papers. Students generate an initial problem statement. As they do research to find out what they need to know, they transfer items from the "need to know" column to the "what do we know" column. Additionally, as they resolve the first problem, often new issues arise or they discover new areas they need to explore. They will generate a revised problem statement as they move to a new phase. When students are ready to formulate a possible solution, they will generate a response to the problem. Part of what students need to know is the issue, assignment, timeline and audience for recommended responses to problems (teacher may provide when giving initial instructions).