

## CONCEPT OF ACTIVE LEARNING<sup>1</sup>

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*Tell me and I may forget.  
Show me and I may remember.  
Involve me and I understand forever.*

Ben Franklin

### BACKGROUND

In its broadest sense, “active learning” stands in contrast to “passive learning.” Beyond this self-evident, common sense distinction lie the questions. (1) What do we mean by active learning? (2) Why is this concept pedagogically important?

To explore the first question, we examined selected literature on active learning.<sup>1</sup> The term is widely used in international discourse on education, and has a variety of interpretations. Active learning, with its roots in elementary education, is often expressed in the form of instructional activities. Categories of instructional activities commonly used with children include:

**Physical Activities as Active Learning.** This seems to be the most common (and perhaps most narrow) use of the term. Purposes of this type of active learning include (1) to improve psychomotor skills; (2) to produce more relaxed and playful children who would be willing learners; and (3) to release children's tensions that might inhibit their efforts to learn. In addition, these activities can help to increase the energy of students who tend to be passive and to calm children who tend to be hyperactive. Examples of such active learning might include sports, exercise, physical games, song, and dance. The focus of these activities is not primarily related to subject matter.

**Physical Activities Related to Subject Matter as Active Learning.** In this approach, bodily movement is a method to be incorporated directly into the learning of subject matter that is usually taught in more passive ways. Physical activity is used to enhance children's academic and mental abilities, such as understanding basic spatial concepts, numbers and mathematics, letters, spelling and reading as well as remembering things and communicating by talking and writing.

**Play as Active Learning.** This view of active learning builds upon children's natural inclination to explore their world through play. One assumption is that children choose to play games combining the use of intelligence and strategy. This is to be expected because the young of all civilizations generally incorporate into their play the skills they perceive as important in adulthood. Four important categories within this approach to active learning include puzzles, games of chance, games of strategy (e.g., simulations), and aesthetic games

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<sup>1</sup>The data includes an analysis of 198 abstracts from a University of Pittsburgh periodical index using the key search term, "active learning."

(e.g., role play, creative dramatics). Some of these latter forms of active learning have gained widespread use in higher education and adult education.

**Academic Tasks as Active Learning.** Activities within this category are often associated with typical classroom practice. Examples include letter writing, quizzes, math and science problems, drawing and coloring, work sheets, laboratories. Although some teachers argue that these academic tasks can provide for active learning, other educators caution that these can become academic rituals that encourages passive learning.

**Experiential Activities as Active Learning.** The intent of this approach to active learning is to help children relate academic subject to the world outside the classroom. Often these activities expect students to use knowledge and skills from several subject areas. Examples include projects, field trips, oral histories, case studies, research, creative performances (e.g., drama, music, dance), individual art (e.g., painting, drawing, sculpture), and original writing (e.g., poetry, stories and personal narrative).

In each of the preceding categories, "activity" is the central concept that defines active learning. This focus on "activity," offers teachers a way of quickly incorporating ideas into the classroom. Given the relentless demands of daily schooling, this expediency is seen as both valuable and practical.

Although this "what works" approach has a certain appeal, there is a danger that the activities can become ends in themselves. If this occurs, it can disconnect teachers from the underlying educative purpose that the activities were intended to serve. It can also disconnect students from the meaning of their classroom efforts.

Often it is assumed that a well planned activity will result in active learning for all students. It is important to remind ourselves that any given school activity can be meaningful and engaging for some students, while other students may see the same activity as school ritual. Therefore, it is important to consider the second question--i.e., why is the concept of active learning pedagogically important?

## **RATIONALE FOR ACTIVE LEARNING**

Two streams of discourse provide the rationale for the pedagogical importance of active learning. One focuses on pedagogy as individual learning; the other focuses on pedagogy as human interaction in groups.

**Pedagogy as Individual Learning.** Concern for education that is responsive to the unique capacities of individuals has a long history. A recent and useful body of research focuses on the notion of multiple intelligences. In *Frames of Mind*, Howard Gardner, an American psychologist, construes seven distinctive ways of knowing, which he refers to as multiple intelligences.

**Logical/Mathematical.** Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handling long chains of reasoning.

**Linguistic.** Sensitivity to the sounds, rhythms, and meanings of words; sensitivity to the different functions of language.

**Musical.** Abilities to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness.

**Spatial.** Capacities to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions.

**Bodily-Kinesthetic.** Abilities to control one's body movements and to handle objects skillfully.

**Inter-personal.** Capacities to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people.

**Intrapersonal.** Access to one's own feelings and the ability to discriminate among them and draw upon them to guide behavior; knowledge of one's own strengths, weaknesses, desires, and intelligences.<sup>2</sup>

It is important to note that Gardner and others believe that there are probably many other intelligences that we have not been able to describe. However, Gardner's working definition of intelligence is:

An intelligence entails the ability to solve problems or fashion products that are of consequence in a particular cultural setting. The problem solving skill allows one to approach a situation in which a goal is to be obtained and to locate the appropriate route to that goal. The creation of a cultural product is crucial to capturing and transmitting knowledge or expression one's views or feelings. The problems to be solved range from creating the end to a story to anticipating a mating move in chess to repairing a quilt. Products range from scientific theories to musical composition to successful political campaigns.<sup>3</sup>

Three early childhood research projects indicate that even four and five year old children exhibit distinctive profiles of strengths and weaknesses in these various intelligences. David Lazear in writing about teaching for multiple intelligences reminds us:

The good news is that each of us has all of these intelligences (and probably many more), but not all of them are developed equally and thus we do not use them effectively. In fact, it is usually the case that one or two intelligences are stronger and more fully developed than the others. But this need not be a permanent condition. We have within ourselves the capacity to activate all of our intelligences. In doing so, extended worlds of sensing, feeling, and knowing are opened to us!<sup>4</sup>

In this view, active learning is seen as more than a collection of discrete activities. Good teachers use activities to awaken and enhance their students' capacity to know in many different ways. Emphasis is on involving students in solving problems or creating products of cultural significance. As Gardner suggests the creation of such cultural products is crucial to capturing and transmitting knowledge or expressing one's views or feelings.

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<sup>2</sup>Gardner, H. & Hatch, T. (Nov. 1989). Multiple intelligences go to school, Educational implications of the theory of multiple intelligences. Educational Researcher. 4 - 10.

<sup>3</sup>Gardner, H.. Frames of Mind.

<sup>4</sup>Lazear, D. G. (1992). *Teaching for Multiple Intelligences*. Bloomington, IN: Phi Delta Kappa Educational Foundation..

**Pedagogy as Human Interaction in Groups.** In the previous section we focused on a way to think about the differences in individual learning. We have suggested that when students are involved in classroom activities which are intended to foster active learning, it is important to note that students respond to activities in very different ways. Gardner's description of multiple intelligences, or ways of knowing, provides teachers with explanations for how individuals come to know their world through various learning proclivities. The framework can help teachers plan for *individual learning*. Yet it is also important to recognize that schooling and pedagogy are concerned with *human interaction in groups*. Educators bring students together so that they can learn in a particular way. They plan subject matter and create situations so that students can make meaning through the schooling experiences.

If, indeed, students learn in groups together, how is it then that they learn (make meaning) from their school experiences. Bruner (1994) has articulated four ways of making meaning through experience. These include:

**Agency.** The need for a student to take control of his/her mental activity, to be responsible for constructing knowledge, to make certain that what he or she does in school matters.

**Reflection.** The ability to look back to an experience and be able to draw significant ideas, insights, questions. Reflection means recalling events, reconstructing them in order to find their meanings, taking them inside the mind.

**Collaboration.** Actively working together by sharing the resources of the mix of human beings involved in teaching and learning. (Mind is inside the head, but it is also with others.) Knowledge is socially constructed through discourse.

**Iture.** The way of life and thought that we construct, negotiate, institutionalize and take for granted. It's what we assume is "reality." Culture provides a lens that we look through to make meaning from our experiences.

As teachers plan for their instruction, it is important for them to keep in mind Bruner's ideas about the ways in which students make meaning during classroom activities. Furthermore, if teachers are determined to plan for active learning, then it is also important to ask, "What are typical classroom scenarios and how is it possible to plan for active learning in each?" In order to address this issue, we will present four typical instructional scenarios which are basic to classroom pedagogy.<sup>5</sup> They depict the teacher and students in four different and complimentary roles. It is important to note that, in addition to teaching subject matter, we teach pupils the "role of student" through the classroom activities. The scenarios help us to determine the scope of the student role (and how active learning is manifest), as well as that of the teacher. Each scenario describes a planning phase and classroom action, including what the teacher will likely be doing in each. The four scenarios are as follows:

## TEACHING/LEARNING SCENARIOS

**SCENARIO 1. INFORMATION GIVING SCENARIO:** This scenario reflects the role of teacher as being directly responsible for the subject matter. Information is directly presented to the student. Often called

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<sup>5</sup>Garman, Noreen.(1986). Reflection, the heart of clinical supervision: A modern rationale for professional practice. *Journal of Curriculum and Supervision.* 2:1, 1-24.

*direct teaching or didactic teaching*, or most commonly called *the* lecture, the teacher is primarily the imparter of information in some form.

Active Learning: It is generally assumed that in this scenario the students are primarily in a position for passive learning. It is the teacher who is responsible for the content. However, there are ways that a teacher can invite students to become active. The teacher may be giving information to a group of students, or reading a story. The teacher can ask students to "finish the story" by stopping the teacher's talk and saying to students, "You may take some time to talk with the person sitting next to you about the story. See if the two of you can come up with a finish." or, in the case of content, the teacher can ask the students to "discuss the information with your neighbor and ask one good question that comes to your mind." Note, if the teacher asks the class in general a question, there is no guarantee that each student will be thinking through the question. If, however, the teacher requests each student to stop and think and discuss the content and then report the discussion to the whole class, it provides the situation for active learning. Notice that in this way the teacher is providing for *reflection* and *collaboration*.

**SCENARIO 2. LARGE GROUP ACTIVITIES:** This scenario reflects teacher-directed instruction, concerned both with the content and the way in which students make meaning from the content. The teacher directs the activities in a large group, and, generally, all participants are focused on the same subject matter. The role of teacher is as director of learning activities in a single group. Class discussion, role play, spelling games, math practices, etc. are examples of activities in which the teacher directs the action.

Active Learning: This scenario provides for more active learning since the activities themselves are planned in order to engage students in the subject matter. Teachers still need to be reminded that when they ask questions of the large group not all students will think about the question. It is therefore suggested (as in Scenario 1) that teachers direct all students into the activities in one way or another and provide for ways to have each student engaged in the learning experiences.

*Note: The first two scenarios are teacher-directed in that the classroom activities are directly controlled and managed by the teacher during the class period. The third and fourth scenarios are student-centered in that the teacher has organized the activities before the class period and the students have heavy responsibility for ownership of the class action during the period. These two scenarios are deliberately planned with agency, reflection, collaboration, and culture, as the centerpiece of active learning.*

**SCENARIO 3. STUDENT CENTERED INSTRUCTION:** In this scenario the subject matter might be the same or it might be different for each student (or group of students). However, the process of learning is managed individually or in small groups by the teacher's planning of learning tasks described to the student in student terms. The role of the teacher is as designer and manager of learning tasks.

Active learning: In this scenario it is common for teachers to plan for students to be in small groups (often called "cooperative learning.") The teacher plans for the small groups to accomplish specific tasks together, such as math problems, discussions about literature, etc. Each group may do the same task, or each group may do different tasks. If groups do different tasks that are related to a larger unit, the class is called "jigsaw class" since each group may have a piece of a larger picture that the teacher wants them to learn. At some point each group reports their accomplishments to the whole class.

**SCENARIO 4. LEARNING HOW TO LEARN.** This is perhaps the hardest scenario to pull off, but perhaps the most crucial. The scenario reflects the teacher as designing and managing a structure in which students learn how to learn about the subject matter. The teacher's role is to help students plan for their

learning, carry out their plans and evaluate their progress as it unfolds. The scenario is most recognizable when students are doing projects, such as research. And, of course, this is the scenario used most often in laboratory and computer classes. One aspect is known as "project-based" or "problem-based" learning.

Active Learning: Teachers are often reluctant to give up the control of their direct instruction in order to allow students to plan and carry out their learning experiences. It is important to note that this scenario provides for agency, reflection, collaboration and culture to be at the center of the activities. Even young children can engage in learning how to learn. They can plan for dramatic presentations, for a debate, for research. Young children can plan for class rituals such as spelling tests and math practice if they are asked to form committees in order to do so. This scenario takes careful planning on the part of the teacher.

We are often asked if there any one of these scenarios is "better" than another one for students. Educators might disagree about the emphasis that teachers put on each. (For instance, to use Scenario 1 continually might encourage passive learning in students.) We hope that students have the opportunity to learn in all four scenarios when they are appropriate for the situations. There is good teaching and poor teaching associated with each one of the four scenarios. It is a good teacher who can plan for learning activities, be able to say why the activities are educative, and engage students in the instructional scenario best suited for the purpose intended. Good teachers engage students for the use of mind and heart.

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<sup>1</sup> This piece was originally prepared for teachers in Bosnia who were struggling after the war to reconceptualize ways of teaching and learning. Much of the educational infrastructure had been destroyed in the war and instructional materials were in short supply. The traditional top down oversight of education was no longer working. Children, traumatized by the war, were having difficulty attending passively to didactic instruction. Noreen Garman was invited to work with the teachers about active learning during this post-war period.