
In Search of Understanding: The Case for Constructivist Classrooms

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Considering the Possibilities

Contrasting Paradigms

Constructivism stands in contrast to the more deeply rooted ways of teaching that have long typified American classrooms. Traditionally, learning has been thought to be a “mimetic” activity, a process that involves students repeating, or miming, newly presented information (Jackson 1986) in reports or on quizzes and tests. Constructivist teaching practices, on the other hand, help learners to internalize and reshape, or transform, new information. Transformation occurs through the creation of new understandings (Jackson 1986, Gardner 1991b) that result from the emergence of new cognitive structures. Teachers and parents can invite transformations, but can neither mandate nor prevent them. For example, after gazing at a block of wood for the first three months of his life, an infant who touches the block with his newly acquired grasping skill transforms his cognitive structures, and thus affects his understandings of the block. Virtually all infants do this. On the other hand, many high school students read Hamlet, but not all of them transform their prior notions of power, relationships, or greed. Deep understanding occurs when the presence of new information prompts the emergence or enhancement of cognitive structures that enable us to rethink our prior ideas.

Why doesn't more thinking and re-thinking occur in schools? Our position is that the mimetic approach to education is too compelling for many educators to give up. It is amenable to easily

FIGURE 2.1
A Look at School Environments

Traditional Classrooms

Curriculum is presented part to whole, with emphasis on basic skills.

Strict adherence to fixed curriculum is highly valued.

Curricular activities rely heavily on textbooks and workbooks.

Students are viewed as “blank slates” onto which information is etched by the teacher.

Teachers generally behave in a didactic manner, disseminating information to students.

Teachers seek the correct answer to validate student learning.

Assessment of student learning is viewed as separate from teaching and occurs almost entirely through testing.

Students primarily work alone.

Constructivist Classrooms

Curriculum is presented whole to part with emphasis on big concepts.

Pursuit of student questions is highly valued.

Curricular activities rely heavily on primary sources of data and manipulative materials.

Students are viewed as thinkers with emerging theories about the world.

Teachers generally behave in an interactive manner, mediating the environment for students.

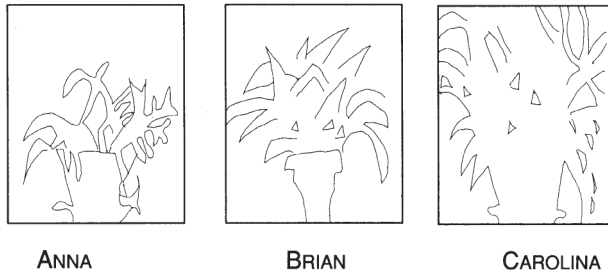
Teachers seek the students’ points of view in order to understand students’ present conceptions for use in subsequent lessons.

Assessment of student learning is interwoven with teaching and occurs through teacher observations of students at work and through student exhibitions and portfolios.

Students primarily work in groups.

Activity 3. The teacher then assigned a new task of drawing negative space by setting up a plant and asking the students to look at it through the same viewfinder. The teacher, once again, asked the students to gaze at the spaces surrounding the object until those spaces took shape. Then, the students drew the spaces around the plant.

FIGURE 5.5



These sets of drawings document the students' progress in looking at objects from various perspectives and recognizing differences. The lessons the teacher designed invited students to look at boundaries from multiple perspectives, a skill that spills over into social studies discussions, geometric principles, and the domain of art and design, among others.

The first two activities minimized the number of variables the students had to consider. The first task didn't ask students to see negative space. It simply helped students categorize negative space and positive space. Thus, the primary cognitive demand of the lesson was one of classification. In the second activity the students focused on negative space, but the viewfinder limited the complexity of the task by defining and limiting the negative space. In chapter 4, we asked educators *not* to reduce the complexity of issues prematurely for students. What's the difference in this example? Here, the teacher wanted the students to consider the concept of perspective without struggling with the frustrations many students experience when attempting to "capture reality" in

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Principle #3

Seeking and Valuing Students' Points of View

Seeking to understand students' points of view is essential to constructivist education. The more we study the learning process, the more we understand how fundamental this principle is. Students' points of view are windows into their reasoning. Awareness of students' points of view helps teachers challenge students, making school experiences both contextual and meaningful. Each student's point of view is an instructional entry point that sits at the gateway of personalized education. Teachers who operate without awareness of their students' points of view often doom students to dull, irrelevant experiences, and even failure. Hunt and Sullivan (1974) state:

If an educational system has only universal goals and a limited variety of educational approaches, it is not surprising that the results for many students will end in failure. This is because these students did not fit the system. It is not entirely the students who are fixed and unchangeable; it is also the system (p. 45).

We have all been to workshops or meetings in which the presenter has begun the session by asking the participants what they hope to learn or accomplish. Often, people's responses are made into a list on the board. Then the presenter starts the session and never again refers to the list. This might be an example of looking for the students' points of view, but it's definitely not an