

# Advantages and Disadvantages of Curriculum Theories

**A**RE YOU MORE MOTIVATED when you set your own goal or when someone else sets a goal for you? Do you like to read independently, or do you get more out of the teacher lecturing? Some education models teach that independence in the classroom works best, whereas others believe that teacher-directed instruction is the most effective. You will learn the advantages and disadvantages of three curriculum models.



## Objective:



Assess the advantages and disadvantages of three curriculum theories.

## Key Terms:



brain-based learning  
constructivist theory

environmentalist theory  
maturational theory

rote activities  
vertical groupings

## The Pros and Cons of Three Curriculum Theories

As with all theories, opinions vary. Positive and negative aspects exist. In addition, no theory has been proven to be applicable for all learners.

## MATURATIONAL THEORY

**Maturational theory** is the belief that development is a biological process that occurs in predictable stages over time and revolves, partly, around heredity. In this theory, a person is born with an inherent pattern of development that unfolds as the person matures.

Maturational theory believes a child develops by stages and acquires knowledge naturally. Par-

ents and teachers can observe the child's development as it happens. Hereditary characteristics of the child should be fostered. Gesell's developmental schedules are an example of sequenced development expectations. They are used as clinical and diagnostic tools by pediatricians and by schools to measure whether younger children are ready to begin school.

**Brain-based learning** (an example of maturational theory) is a theory about how the brain learns naturally and encourages multiple ways of learning. In general terms, the focus of the left hemisphere of the brain is math and science, and the focus of the right hemisphere is creativity. Brain-based learning immerses the student into a subject using social settings, simulated real-life situations, and problem solving. Music is often used to encourage a calm, relaxing mood. Examples of brain-based curriculum are Kolb's Learning Styles and Gardner's Multiple Intelligences.



**FIGURE 1.** Maturational theory teaches brain-based learning activities.

### **Advantages of Maturational Theory**

One advantage of maturational theory is that experiments and tests (MRIs and CAT scans) are able to identify areas of the brain where learning occurs naturally. Brain-based learning works well when it is based on life experiences and matches your level of maturity. Also, you retain more when you experience practical applications of your interests. Another advantage is that brain-based learning uses portfolios and demonstrations in addition to homework and test scores to assess your progress.

### **Disadvantages of Maturational Theory**

While Gesell's research that supports developmental schedules is useful, the research has a cultural bias because it was limited to white, middle-class children. For brain-based learning, customized lesson plans are required for each student. However, time limits for teacher preparation may not allow for individual customized plans.

Brain-based learning is fairly young (developed in 1990), does not have extensive testing, and has a lack of support from some experts. Furthermore, students are sometimes categorized into two groupings: left brained (math and science focused) and right brained (English and creative arts focused). Some experts believe that brain-based learning is incorrect because grammar and word production utilize both hemispheres of the brain.

## **ENVIRONMENTALIST THEORY**

**Environmentalism theory** is the belief that a child's surroundings shape learning and behavior. It received contributions from John Watson, B.F. Skinner, and Albert Bandura.

Environmentalists believe a child is ready for kindergarten when he or she can interact with the environment appropriately (e.g., respond to directions, follow rules, and demonstrate positive behaviors).

Activities that best fit environmentalist theory are alphabet recitation, copying/tracing letters and numbers, and completing workbook sheets. Environmentalists use **rote activities** (memorized routines or content learned through repetition). For instance, preschoolers repeat a song or rhyme until it is remembered. The direct instruction curriculum model designed by Carl Bereiter and Siegfried Englemann is a favorite of the environmentalist educator. The teacher-centered curriculum model focuses on the academics of language, mathematics, and reading.

### **Advantages of Environmentalist Theory**

Several classroom advantages exist for environmentalist theory approaches. First, lessons are designed in blocks of 20 minutes so material is learned gradually. Ten percent is new material, and the rest is review. Also, each student is placed in a skill-level group rather than an age group to progress at his or her rate. Instruction is modified to the student's rate of learning. In addition, the direct instruction method has been studied for 40 years and is used in all grade levels for mathematics and English.

### **Disadvantages of Environmentalist Theory**

Following are a few disadvantages of environmentalist theory approaches. For example, a child who cannot or will not follow instructions from the teacher will not be successful in this curriculum and may be considered learning disabled. In addition, a child placed in a slower or lower-level learning group may experience "labeling" from other children. Also, a hyperactive child may have difficulty remaining at his or her desk and listening quietly in environmentalist learning activities.

## **CONSTRUCTIVIST THEORY**

**Constructivist theory** is a student-centered learning theory based on authentic experiences in which students make connections and solve complex problems. Constructivists theorize that people learn only that which they construct themselves. Constructivist curriculum models (advanced by Jean Piaget) often have learning centers for play. Experiences are used as learning opportunities, and a child "constructs" his or her own knowledge through experiences. New knowledge is built on prior experiences.



**FIGURE 2.** Environmental theory teaches that children learn from their surroundings.

## Curriculum Models

Some principles are the same, but each of the following curriculum models has different methods to reach the educational goals: Montessori, Reggio Emilia, emergent curriculum, and play-based curriculum.

### Montessori

Montessori education, founded by Maria Montessori, emphasizes independence and respect. This constructivist model provides a structured environment with an open plan populated with learning materials designed to meet the whole child's needs. Materials are provided on low shelves where the child is free to choose activities. The class consists of **vertical groupings** (multi-age groups, such as 2 to 5 and 6 to 12), as Montessori believes a child learns by watching others play and work. A child's physical, emotional, social, and cognitive development is individual and is not based on a chronological age. Reality activities (e.g., dusting and setting the table) are used instead of fantasy (e.g., fighting a dragon).

### Reggio Emilia

Reggio Emilia was developed by Loris Malaguzzi after World War II and allows a child to learn through experiences. It includes parent involvement. The lessons have no time slots, allowing for student interest and needs.

### Emergent Curriculum

Emergent curriculum is built on child interests. It is based on Piaget's and Vygotsky's constructionist theories, which document the project with student words, drawings, and photos. Lessons are not determined by the instructor in advance but by student interest.



## ON THE JOB...

### CAREER CONNECTION: Becoming a Montessori Teacher

If you are interested in becoming a teacher, you must complete the required college preparation and pass certain tests. Most universities have teacher education programs (TEPs). The Montessori model is a distinctive constructivist learning theory, and a Montessori teacher shares much in common with traditional teachers: a care for the welfare of students, the desire to inspire learning, and the ability to assess progress in student learning. Key differences in the types of teaching exist as well. Classroom management, understanding how to use the learning materials, and the age grouping of students are different.

Because of these differences, there is a separate training method for aspiring Montessori teachers. The Montessori Accredited Council for Teacher Preparation (MACTP) has been recognized by the U.S. Department of Education since 1995. To become a Montessori teacher, you can attend a Montessori accredited teacher education program at a university, or you can attend an independent Montessori preparation school. Learn more about becoming a Montessori teacher at <http://amshq.org/Teacher-Resources/AMS-Teacher-Education-Programs.aspx> and <http://www.wikihow.com/Become-a-Montessori-Teacher>.

## Play-Based Curriculum

Play-based curriculums (e.g., Te Whariki, Reggio Emilia, and High/Scope) include language, history, mathematics, and/or students playing “going to work.” Other active learning constructivist curriculum models are the Bank Street Developmental-Interaction Approach, Dodge Creative Curriculum for Preschool, Progressive Learning Theory, and Kamii-DeVries Constructivist Perspective.

## Advantages of Constructivist Theory

Constructivist theory has some advantages in the classroom. For example, classrooms are divided into learning centers with appropriate manipulative materials that allow students freedom of movement. Also, teachers have direct communication with children and observe their interests. After determining the children’s interests, instructors often incorporate maturation and environmentalist theory techniques to introduce cognitive learning in science, math, language, and reading. In addition, the pacing and schedule allows time for teachers to ask open-ended questions of the children.



**FIGURE 3.** In a constructivist classroom, children are more likely to receive individualized instruction.

## Disadvantages of Constructivist Theory

Obviously, disadvantages of constructivist theory also exist. For instance, the approach may not prepare a child for traditional teacher-centered learning environments. Because each child is encouraged to learn on his or her own, he or she may migrate to one learning center without experiencing all areas of learning. Also, a reserved child may not participate in discussions with the instructor or answer open-ended questions about the activities. In addition, large areas are needed for the learning centers, with enough space for exploring. Plus, it is a necessary challenge to teach each child to keep the learning environment organized by placing materials back in their places for others to use. Otherwise, the idea of a learning center is lost.

## Summary:



Three curriculum models are maturational theory, environmentalist theory, and constructivist theory. An advantage of maturation theory is that experiments and tests are able to identify areas of the brain where learning occurs naturally. A disadvantage is that students are sometimes categorized into two groupings: left brained and right brained. An advantage of environmentalist theory is that the environment



can be highly structured into blocks of time with a controlled introduction of new information. One disadvantage is that some children have difficulty remaining on task. An advantage of constructivist theory is that students have a high degree of freedom and self-interest to drive their learning. A disadvantage is that a large learning environment and sufficient materials are needed. Keeping it organized can be challenging.

### Checking Your Knowledge:

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1. What is an advantage of the maturational theory?
2. What is an advantage of the constructivist theory?
3. How would you compare the advantages of environmentalist theory with the advantages of constructivist theory? Are they similar or opposite? Explain.
4. What are three examples of constructivist learning models presented?
5. With respect to controlling the learning environment, compare the environmentalist with the constructivist theories. In each theory, whom do you see controlling the learning environment more: teachers or students?

### Expanding Your Knowledge:

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Research learning materials for Montessori school primary (ages 3 to 5). Create a budget for purchasing enough learning materials for a classroom with 10 students.

### Web Links:

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#### **Cognitive Constructivism**

<http://viking.coe.uh.edu/~ichen/ebook/et-it/cognitiv.htm>

#### **Advantages of Brain-Based Learning**

[http://www.ehow.com/list\\_6321634\\_advantages-brain-based-learning\\_.html](http://www.ehow.com/list_6321634_advantages-brain-based-learning_.html)

#### **Curriculum Theory and Childhood Development**

<http://www.tcrecord.org/library/abstract.asp?contentid=2607>