

Curriculum Theories

A LOT HAPPENS at school before you ever enter the classroom. For instance, teachers and principals have spent much time making curriculum decisions and determining which methods to use in the classroom. We will focus on three learning theories that help schools prepare curriculum.



Objective:



Explain three learning theories.

Key Terms:



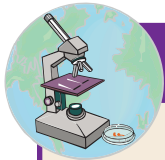
brain-based learning
constructivist theory
environmentalist theory
maturational theory
rote activities
vertical groupings

Learning Theories and School Curriculum

Various learning theories exist that continue to change the framework of education and impact current curriculum.

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 child is born with an inherent pattern for how he or she will develop. Caregivers are able to watch the child



EXPLORING OUR WORLD...

SCIENCE CONNECTION: Empirical Learning Theories

Empirical learning theories are based on observations. When a scientist observes data in the world, an empirical theory emerges. The theory is a set of assumptions about how the world works. Usually many theories can be used to explain the world, including learning theories. Dozens of learning theories have been created by scientists over the years. Explore them, and decide which three theories you agree with most: <http://www.instructionaldesign.org/theories/index.html>

Environmentalists believe a child is ready for kindergarten when he or she can respond to directions, follow rules, and exhibit positive behaviors. Activities that best fit environmentalist theory include reciting the alphabet, completing workbook assignments, and repeatedly writing or copying letters and numbers.

Environmentalists use **rote activities** (memorized routines or content learned through repetition) and/or have the preschooler repeat a song or rhyme until it is remembered. The following songs are typical of learning through repetition. The “Alphabet Song” is used to teach the order of the alphabet. “Five Little Monkeys” and “Once I Caught a Fish Alive” are used to teach numbers. “Where Is Thumbkin?” is used to teach manners. “Open, Shut Them” is used to teach opposites. “Head and Shoulders, Knees and Toes” is used to teach body parts and provide exercise.



FIGURE 2. Environmentalists believe in rote activity, such as completing workbook assignments.

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. Highly structured materials, such as Direct Instruction System for Teaching Arithmetic and Reading (DISTAR), are used in the direct instruction curriculum. Lessons are designed in 20-minute blocks, and students are placed in skill-level groups for study rather than in grade-level groups. Options are available for slower learners to have more practice, and a “fast cycle” is used for children who already have the specific skill.

CONSTRUCTIVIST THEORY

Constructivist theory is a student-centered learning theory, based on authentic, real-world experiences, in which a student makes connections and solves complex problems. New knowledge is built on prior experiences. Constructivists believe a person learns only that which he or she constructs, so a child should actively participate in the learning process. Constructivist curriculum models often have learning centers for play. A child's experiences are used as learning opportunities. Therefore, a child "constructs" his or her own knowledge through personal experiences.



FIGURE 3. Constructivist curriculum models often have learning centers where children play.

Montessori Education System

The 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 so the child is free to choose activities.

The class consists of **vertical groupings** (multi-age groups of children, such as 2- to 5-year-old children and 6- to 12-year-old children), as Montessori supporters believe 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 are used instead of fantasy. For example, a child may dust shelves or wash vegetables for lunch instead of playing house. Teachers facilitate and guide student learning in small-group lessons, and observations are made during the learning center on active learning experiences.



FIGURE 4. In Montessori education, various age groups are common in one classroom.

Reggio Emilia

Reggio Emilia is an educational philosophy developed by Loris Malaguzzi after World War II. Reggio Emilia is the name of the town in northern Italy in which the constructivist model began. Parent involvement is essential to the programming. Parents attend meetings to discuss school policies, curriculum, and child development. Lessons do not have time slots. Each student has time to express, learn, and explore as his or her needs and interests dictate.

The four philosophies of the Reggio Emilia approach are:

- ◆ A child is given some control over the direction of his or her learning.
- ◆ A child learns by experiencing the senses: seeing, hearing, touching, listening, and moving.
- ◆ A child builds relationships with other children and with the elements of his or her world. Exploring these relationships is essential.
- ◆ A child needs numerous ways and numerous opportunities for self-expression.

Emergent Curriculum

Emergent curriculum is a part of constructivist learning theory and is built on the interests of the children. The curriculum model is attributed to the Reggio Emilia approach and is based on Piaget's and Vygotsky's constructivist theories. The theory of the emergent curriculum includes several steps. First, a topic of interest to the child is selected. Then concrete items are used in the lesson and are described in the child's own words. Next, the project is documented as it emerges, with photos and drawings described in the child's own words. Curriculum is based on projects and is not determined in advance. The lessons are based on the child's interests and questions discovered during observations.

Following are examples of emergent curriculum related to observing a child playing imaginary boats on the sea. Emergent science topics might include boat models, marine life, and experiments of floating and sinking boats. Emergent dramatic play topics might include pirates and treasure hunts, and an emergent project might be building a sail for a large wooden play boat. Emergent language topics might include boat and sea readings and vocabulary terms. Emergent math topics might include measuring and calculating in experiments and projects. In the NAEYC article "One Teacher, 20 Preschoolers, and a Goldfish," Ann Lewin-Benham discussed how what children learn about their environment is evident in their favorite books, daily vocabulary, drawings, interests, and comments.

Play-based curriculum identifies play and the relationship to learning and development. It contributes to the cognitive, social-emotional, and physical domain areas. Curriculum models include Te Whariki, Reggio Emilia, and High/Scope. Play-based curriculum may include language, history, mathematics, or students playing "going to work." Other active learning constructivist curriculum models are the Bank Street Developmental-Interaction approach, the Dodge Creative Curriculum for Preschool, the Progressive Learning Theory, and the Kamii-DeVries Constructivist Perspective.

Summary:



Maturation theory, the constructivist theory, and the environmentalist theory are curriculum theories used by schools to design curriculum and learning activities. Maturation theory is the belief that development is a biological process that occurs in predictable stages over time. In maturation learning theory, brain-based learning is emphasized as the theory assumes that child's brain and learning mature simultaneously through stages.

Environmentalist theory is the belief that a child's surroundings shape learning and behavior. In an environmentalist curriculum, schools establish an environment that supports the intended learning objective. For example, for memory work, the curriculum has children performing rote activities designed to memorize information.

Constructivist theory is a student-centered learning theory based on authentic, real-world experiences in which students make connections and solve complex problems. Examples of constructivist learning environments are Montessori, Reggio Emilia, emergent curriculum, and play-based curriculum. These approaches are more child-centered and involve children building knowledge linked with their interests and experiences.

Checking Your Knowledge:



1. Describe the three learning theories presented.
2. Explain one different assumption between maturation theory and constructivist theory.
3. What are the age groupings in Montessori education, and what is the reason behind using these age groupings?
4. Under which learning theory does emergent learning fall? Why does it fit into that learning theory?
5. What are three educational models referenced that fall under the constructivist learning theory?

Expanding Your Knowledge:



Explore the following approaches: Bank Street Developmental-Interaction Approach, the Dodge Creative Curriculum for Preschool, the Progressive Learning Theory, and the Kamii-DeVries Constructivist Perspective. Create a chart displaying the major themes and practices of these constructivist learning approaches.

Web Links:



Cognitive Constructivism

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

Effectiveness of Direct Instruction

http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_197910_peterson.pdf

“All I Really Need to Know I Learned in Kindergarten”

<http://www.scrapbook.com/poems/doc/842.html>

Montessori Education System

http://montessorichildrengs.reachlocal.com/?scid=1907511&kw=885496&pub_cr_id=8474859591