

Advantages and Disadvantages of Curriculum Theories

Unit: Acquisition of Knowledge Base

Problem Area: Review Curriculum Theories

Lesson: Advantages and Disadvantages of Curriculum Theories

■ **Student Learning Objectives.** Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the advantages and disadvantages of maturation theory.**
- 2 Explain the advantages and disadvantages of environmentalist theory.**
- 3 Explain the advantages and disadvantages of constructivist theory.**

■ **Resources.** The following resources may be useful in teaching this lesson:

“Arnold Gesell,” *New World Encyclopedia*. Accessed Dec. 4, 2011.

http://www.newworldencyclopedia.org/entry/Arnold_Gesell.

Chen, Irene. “Overview of Cognitive Constructivism,” *An Electronic Textbook on Instructional Technology*. Viking. Accessed Dec. 5, 2011.

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

“Direct Instruction: Why Are DI Programs Effective?” *NIFDI*. Assessed Dec. 5, 2011. <http://www.nifdi.org/15/news/140-why-is-di-effective>.

Jones, Kasey. “What Are the Advantages of Brain Based Learning?” *eHow*.

Accessed Jan. 13, 2012. http://www.ehow.com/list_6321634_advantages-brain-based-learning_.html.



Lewin-Benham, Ann. "One Teacher, 20 Preschoolers, and a Goldfish—Environmental Awareness, Emergent Curriculum, and Documentation," *Beyond the Journal—Young Children on the Web*, March 2006. Accessed Dec. 10, 2011. <http://journal.naeyc.org/btj/200603/LewinBTJ.pdf>.

Lunenburg, Fred C. "Curriculum Models for Preschool Education: Theories and Approaches to Learning in the Early Years," *Schooling*, Vol. 2, No. 1, 2011. Accessed Dec. 5, 2011. http://printfu.org/read/curriculum-models-for-preschool-education-theories-and-approaches—b95a.html?f=1qeYpurpn6Wih-SUp0GunaWnh6_k6Nfdy9rc59a0wdXZ0tHfj9zU5oi14tfc0dzV5NmFsdPryNXczt_go47Iztrc19XU6YXV1smQs9ne5tXWOM3R4paTopaHq-WjoK6I6eGHP-KwlqWih9m30Lh1sW9ytjUmKDnopaqlM-Qr9mvnpydqZjN6NzVqqGY5evdo9vG4Njl09XUy9_k3tuiyeTalLHb28jo2tTe28yTppa_3Nre3dfRmZqVxuHV4-HL6Jyx4d3b09bd19eejqCkrOfSyZGhpqijjZegtd7g5s_Y4tHh3JuXpLXU1NfV4ZmYpdPU3pSolcTayuPV0d3j0pqflbHT68jV3M7f4l6gpJ0an5W_Ot7U49T03tmOoKS8p5KXnL2niqaYl6CjmpzkytuPoOk.

"The Montessori Method," *ICME*. Accessed Dec. 3, 2011. <http://www.montessori-icme.com/method.html>.

Penn, Sharon. "Brain-Based Learning and Teaching," *eHow*. Accessed Dec. 3, 2011. http://www.ehow.com/about_6502830_brain_based-learning-teaching.html.

"Reggio Emilia Approach," *Wikipedia*. Accessed Dec. 10, 2011. http://en.wikipedia.org/wiki/Reggio_Emilια_approach.

"Theories of Child Development and Learning," *NCREL*. Accessed Dec. 3, 2011. <http://www.ncrel.org/sdrs/areas/issues/students/earlyclid/ea7lk18.htm>.

Wood, Elizabeth, and Jane Attfield. "Developing Play in the Curriculum," *Play, Learning and the Early Childhood Curriculum*, 2nd ed. Sage Publishing, 2005, Chap. 5. Accessed Dec. 10, 2011. www.sagepub.com/upm-data/9679_010979.pdf.

■ **Equipment, Tools, Supplies, and Facilities**

- ✓ Overhead or PowerPoint projector
- ✓ Visual(s) from accompanying master(s)
- ✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
- ✓ Materials listed on duplicated items
- ✓ Computers with printers and Internet access
- ✓ Classroom resource and reference materials

■ **Key Terms.** The following terms are presented in this lesson (shown in bold italics):

- ▶ brain-based learning
- ▶ constructivist theory
- ▶ environmentalist theory

- ▶ maturation theory
- ▶ rote activities
- ▶ vertical groupings

- **Interest Approach.** Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Project VM–A. Discuss the quotations. (If you have other favorite educational quotations, add them.) What advantages and disadvantages are the quotations stating about curriculum theories and education? Many theories of learning and curriculum trends are used in preschool curriculum design. Often a preschool will use a combination of several curriculum theories. This lesson focuses on the advantages and disadvantages of various theories of learning.

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Explain the advantages and disadvantages of maturation theory.

Anticipated Problem: What are the advantages and disadvantages of maturation theory?

I. Maturation theory

A. **Maturation 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, heredity provides a preordained sequence in which indicators of behavior development are observed. Maturation theory believes a child develops by stages and acquires knowledge naturally. The hereditary characteristics of the child should be fostered.

1. Gesell's Developmental Schedules, to measure normal development, are used as clinical and diagnostic tools by pediatricians and as kindergarten- and school-readiness instruments.
2. **Brain-based learning** 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:
 - a. Kolb's Learning Styles

- b. Gardner’s Multiple Intelligences
- B. Advantages of maturation theory
 1. Experiments and tests (MRIs and CAT scans) identify areas of the brain where learning occurs naturally.
 2. Brain-based learning works well when learning is based on students’ life experiences (experiential learning and constructivist theory).
 3. Students retain more when they experience practical applications of their interests.
 4. Brain-based learning uses portfolios and students’ demonstrations in addition to homework and test scores to assess progress.
- C. Disadvantages of maturation theory
 1. Customized lesson plans are required for each student (brain-based focus). Time limits for teacher preparation may not allow for individual customized plans.
 2. As it has not been tested over time (it was developed in 1990), brain-based learning has a lack of support from some experts. Also, Gesell studied only white, middle-class children.
 3. Students are sometimes categorized into two groupings:
 - a. Left-brained (math and science adept)
 - b. Right-brained (English and creative arts adept)
 4. Some experts believe that brain-based learning is incorrect because grammar and word production utilize both hemispheres of the brain.

Teaching Strategy: *Let students take an online test to determine whether they are predominately left-brained or right-brained. If time permits, have students research curriculum theory and present their findings to the class. Use VM–B through VM–E to facilitate a class discussion. You may conduct the discussion or have students conduct it.*

Objective 2: Explain the advantages and disadvantages of environmentalist theory.

Anticipated Problem: What are the advantages and disadvantages of environmentalist theory?

II. Environmentalist theory

- A. **Environmentalist theory** is the belief that a child’s surroundings shape learning and behavior. “Human behavior, development, and learning are thought of as reactions to the environment” (“Theories of Child Development and Learning”—see Resources). Environmentalist theory received contributions from John Watson, B. F. Skinner, and Albert Bandura.
 1. Environmentalists believe a child is ready for kindergarten when he or she can:
 - a. Respond to directions

- b. Follow rules
- c. Demonstrate positive behaviors
- 2. Activities that best fit environmentalist theory include:
 - a. Reciting the alphabet
 - b. Copying or tracing letters and numbers
 - c. Completing workbook sheets
- B. 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.
- C. 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.
- D. Advantages of environmentalist theory
 - 1. Lessons are designed in blocks of 20 minutes so that students learn material gradually. Ten percent is new material, and the rest is review.
 - 2. Students are placed in skill-level groups rather than age groups to help each progress at his or her own rate.
 - 3. Instruction is modified to the student's rate of learning.
 - 4. The direct instruction method has been studied for 40 years and is used in all grade levels for mathematics and English.
 - 5. Everyone remembers the alphabet, numbers, and the multiplication tables from rote activities learned at a younger age.
- E. Disadvantages of environmentalist theory
 - 1. Children who cannot or will not follow instructions from the teacher are not successful in this curriculum and may be considered learning disabled.
 - 2. Children placed in slower or lower-level learning groups may experience "labeling" from other children.
 - 3. Hyperactive children have difficulty remaining at desks and listening quietly in environmentalist learning activities.

Teaching Strategy: *Lead the class in the rote songs and rhymes or memorization activities used in a direct instruction curriculum, or have students do so. Discuss the advantages and disadvantages of using rote songs and rhymes. Use VM–F and VM–G to facilitate class discussion conducted by you or students.*

Objective 3: Explain the advantages and disadvantages of constructivist theory.

Anticipated Problem: What are the advantages and disadvantages of constructivist theory?

III. Constructivist theory

A. **Constructivist theory** is a student-centered learning theory, based on authentic, real-world experiences, in which students make connections and solve complex problems. Students' new knowledge is built on prior experiences. Constructivists theorize that people learn only that which they construct themselves.

“Constructivists believe that children learn when they interact with the world, people, and their surroundings. Constructivists also believe that children [should] actively participate in the learning process” (“Theories of Child Development and Learning”—see Resources).

1. Constructivist curriculum models (advanced by Jean Piaget) often have learning centers where children play. The children's experiences are used as learning opportunities.
2. The children “construct” their own knowledge through experiences.

B. Curriculum models

1. 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 children are free to choose activities. The class consists of **vertical groupings** (multi-age groups of children, perhaps 2- to 6 $\frac{1}{2}$ -year-olds), as Montessori believes children learn from watching others play and work. Children's physical, emotional, social, and cognitive development is individual and not based on a chronological age. Reality activities are used instead of fantasy.
2. Reggio Emilia (developed by Loris Malaguzzi after World War II) allows children to learn through experiences and includes parent involvement. Lessons have no time slots, allowing for student interest and needs.
3. Emergent curriculum is built on the interests of the children. Emergent curriculum is based on Piaget's and Vygotsky's constructionist theories, which document the project with student words, drawings, and photos as it emerges. Lessons are not determined by the instructor in advance but by student interest.
4. Play-based curriculums (Te Whariki, Reggio Emilia, and High/Scope) include language, history, mathematics, or the students' playing “going to work.”
5. Other active learning constructivist curriculum models include Bank Street Developmental-Interaction Approach, Dodge Creative Curriculum for Preschool, Progressive Learning Theory, and Kamii-DeVries Constructivist Perspective.

C. Advantages of constructivist theory

1. Classrooms are divided into learning centers with appropriate manipulative materials that allow students freedom of movement.
2. Teachers have direct communication with children and observe their interests.
3. After determining the children's interests, instructors often incorporate maturation and environmentalist theory techniques to introduce cognitive learning in science, math, language, and reading.
4. The schedule allows time for teachers to ask open-ended questions of the children.

D. Disadvantages of constructivist theory

1. It may not prepare a child for the traditional teacher-centered kindergarten.
2. Because children are encouraged to learn on their own, some children migrate to one learning center without experiencing all areas of learning.
3. Reserved children may not participate in discussions with the instructor or answer open-ended questions about the activities.
4. Developing curriculum around the children's interests may not provide for every individual interest.
5. Large areas are needed for the learning centers, with enough space for exploring.
6. Unless students are taught the discipline of returning materials to the correct learning center, the concept of a learning center is lost until the instructor can organize the materials again.

Teaching Strategy: *Students might observe preschoolers and determine what emergent lessons could be developed to match the children's interests. Read excerpts of Ann Lewin-Benham's "One Teacher, 20 Preschoolers, and a Goldfish" (see Resources) to the class. You may prefer to start reading at the heading "The Goldfish Arrives." The article could be projected, and students could read along with you. Student-directed questions and discussion could follow the reading. Identify advantages and disadvantages of the curriculum model. Use VM-H and VM-I, to facilitate a teacher- or student-lead discussion of the advantages and disadvantages of constructivist theories. Assign LS-A as a small team demonstration to summarize the lesson.*

■ **Review/Summary.** Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. If a textbook is being used, questions at the ends of chapters may also be used in the Review/Summary.

■ **Application.** Use the included visual master(s) and lab sheet(s) to apply the information presented in the lesson.

- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.

- **Answers to Sample Test:**

Part One: True/False

1. F
2. T
3. T
4. F
5. T
6. T
7. F
8. F
9. T
10. T

Part Two: Completion

1. hyperactive
2. brain
3. Rote
4. constructivist
5. Montessori
6. constructivist
7. brain-based (or maturation)
8. environmentalist

Part Three: Short Answer

1. Answers will vary but should reflect the content of the lesson. See the Content Summary section of this lesson plan. For the “budding teacher,” this question will be insightful and reflective. The responses to this question would support a lively class discussion. Use your discretion in grading this item.
2. Answers will vary but should reflect the content of the lesson. See the Content Summary section of this lesson plan. For the “budding teacher,” this question will be insightful and reflective. The responses to this question would support a lively class discussion. Use your discretion in grading this item.

Advantages and Disadvantages of Curriculum Theories

► Part One: True/False

Instructions: Write *T* for true or *F* for false.

- ___ 1. Maturation theory allows time for teachers to ask open-ended questions of the children.
- ___ 2. Environmentalists modify curriculum to meet the student's rate of learning.
- ___ 3. Children who cannot or will not follow instructions from the teacher are not successful in the environmentalist classroom.
- ___ 4. Environmentalist classrooms require large areas for the learning centers, with enough space for exploring.
- ___ 5. A constructivist curriculum model may not prepare a child for the traditional teacher-centered kindergarten.
- ___ 6. Constructivist classroom schedules allow time for teachers to ask open-ended questions of the children.
- ___ 7. In maturation theory classrooms, teachers have direct communications with children and observe their interests.
- ___ 8. Maturation classrooms place students in skill-level groups rather than age groups to help each student progress at his or her own rate.
- ___ 9. Brain-based learning classrooms have customized lesson plans for each student.
- ___ 10. Experiments and tests (MRIs and CAT scans) identify stages of the brain where learning occurs naturally.



► Part Two: Completion

Instructions: Provide the word or words to complete the following statements.

1. Children who have difficulty remaining in desks and listening quietly are sometimes termed _____.
2. Grammar and word production utilize both hemispheres of the _____.
3. _____ activities are memorized routines or content learned through repetition.
4. The curriculum theory that is student-centered and based on authentic, real-world experiences is _____ theory.
5. Curriculum that utilizes vertical groupings is _____ education.
6. The curriculum model that provides learning centers for children to play and explore is _____.
7. The curriculum theory that uses portfolios and students' demonstrations in addition to homework and test scores to assess progress is _____.
8. Kindergarten readiness includes responding to directions, following rules, and demonstrating positive behaviors, according to the _____ theory.

► Part Three: Short Answer

Instructions: Answer the following.

1. Think back to preschool or kindergarten. What was the prevailing curriculum theory used by your teacher? Describe the typical daily routine of your classroom. Give one example of an activity that relates to the curriculum theory you believe was used.

2. If you were a preschool or kindergarten teacher, which curriculum theory would you use in your classroom. Explain your choice? List one advantage and one disadvantage of the theory you selected.

QUOTATIONS— CURRICULUM THEORIES

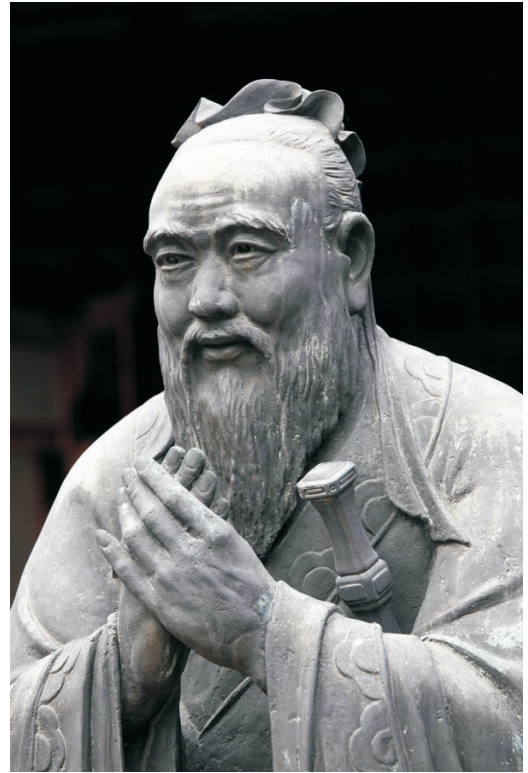
“By three methods we may learn wisdom: First, by reflection, which is noblest; Second, by imitation, which is easiest; and third by experience, which is the bitterest.”—Confucius

“The founding fathers in their wisdom decided that children were an unnatural strain on their parents. So they provided jails called school, equipped with tortures called education.”—John Updike

“The beautiful thing about learning is that no one can take it away from you.”—B. B. King

“Education’s purpose is to replace an empty mind with an open one.”—Malcolm Forbes

“What we learn to do, we learn by doing.”—Thomas Jefferson



MATURATION THEORY MILESTONES: MOTOR AND LANGUAGE

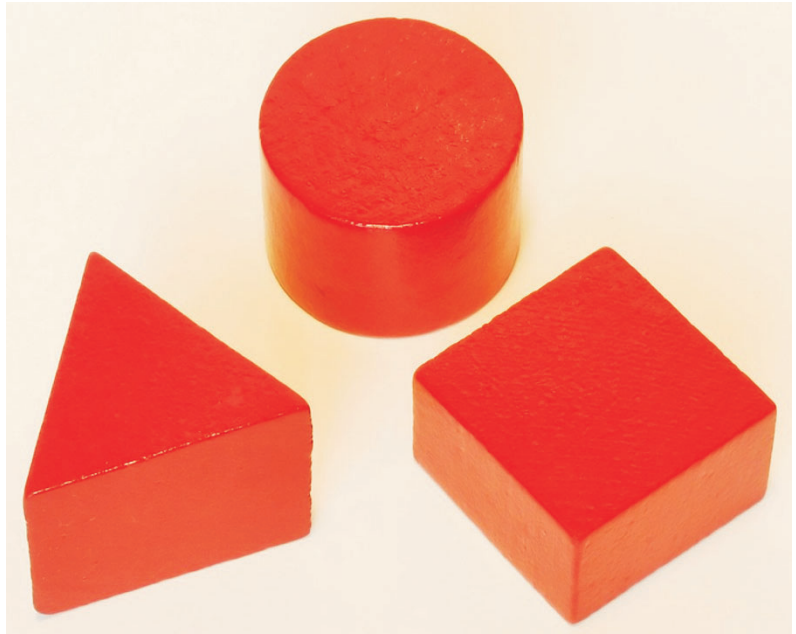
- ◆ Motor skills include hopping, such as in this game of hopscotch; skipping; and throwing and catching beanbags.
- ◆ Language abilities include reading, writing, speaking, and listening. They also include picture vocabulary—filling in the missing letter or the missing vowel and unscrambling letters to form the word the picture describes.



MATURATION THEORY MILESTONES: ADAPTIVE AND PERSONAL-SOCIAL

◆ Adaptive skills include paper-and-pencil activities, such as drawings a preschool child should be able to create. For example, most 3-year-olds can draw a circle, most 4½-year-olds can draw a square, and most 5-year-olds can draw a triangle.

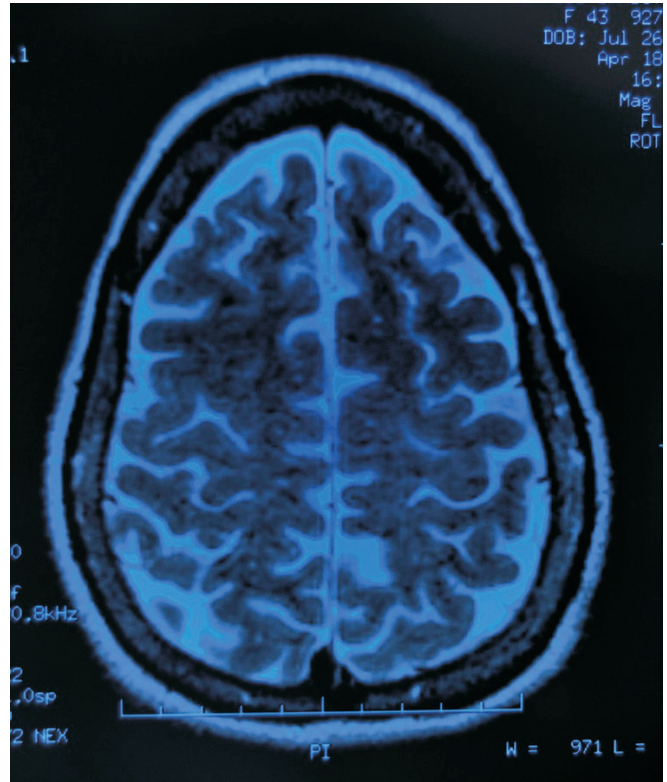
◆ Personal-social skills include feeding, dressing, playing, and communicating.



MATURATION THEORY: ADVANTAGES

Areas of the brain where learning occurs can be identified.

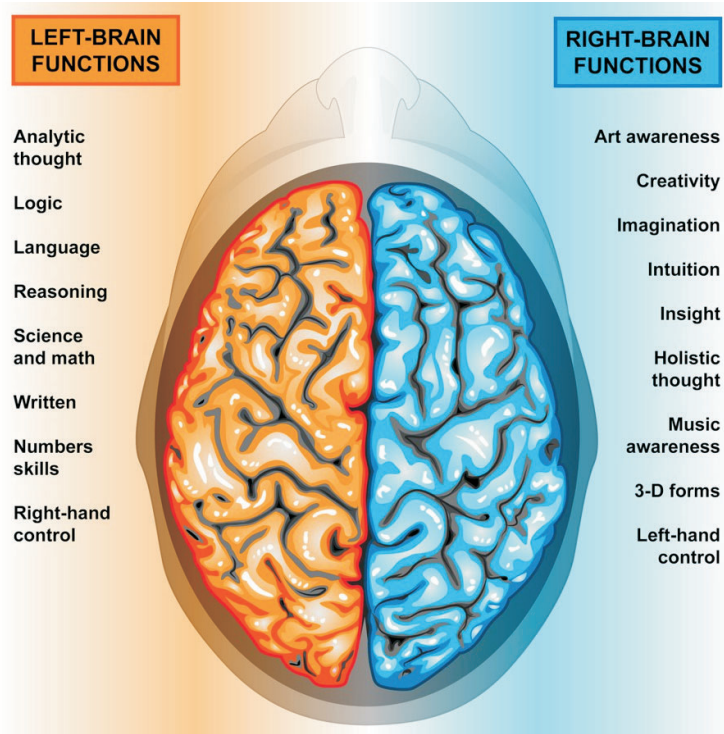
- ◆ Experiments and tests (MRIs and CAT scans) identify areas of the brain where learning occurs naturally.
- ◆ Brain-based learning works well when learning is based on students' life experiences (experiential learning and constructivist theory).
- ◆ Students retain more when they experience practical applications of their interests.
- ◆ Brain-based learning uses portfolios and students' demonstrations in addition to homework and test scores to assess progress.



MATURATION THEORY: DISADVANTAGES

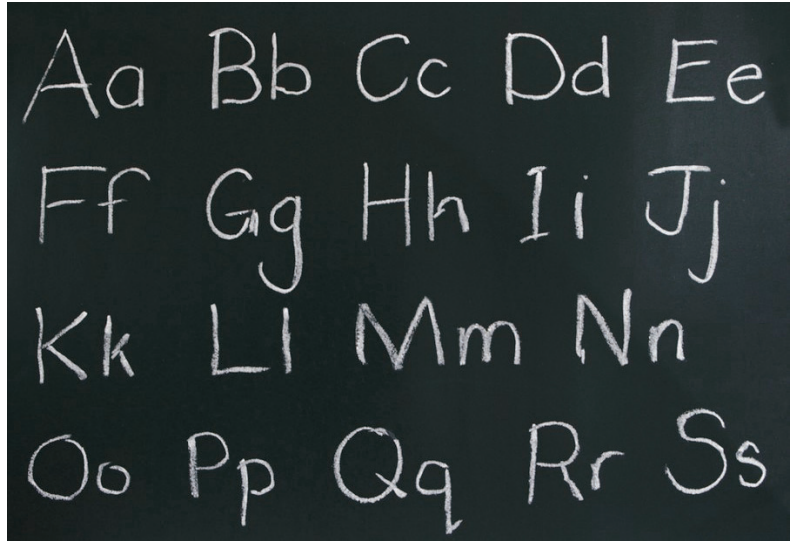
Children are sometimes categorized as left-brained or right-brained.

- ◆ Customized lesson plans are required for each student (brain-based focus). Time limits for teacher preparation may not allow for individual customized plans.
- ◆ As it has not been tested over time (it was developed in 1990), brain-based learning has a lack of support from some experts. Also, Gesell studied only white, middle-class children.
- ◆ Students are sometimes categorized into two groupings: left-brained (math and science adept) and right-brained (English and creative arts adept).
- ◆ Some experts believe that brain-based learning is incorrect because grammar and word production utilize both hemispheres of the brain.



ENVIRONMENTALIST THEORY: ADVANTAGES

Everyone remembers the alphabet learned at a younger age.



- ◆ Lessons are designed in blocks of 20 minutes so that students learn material gradually. Ten percent is new material, and the rest is review.
- ◆ Students are placed in skill-level groups rather than age groups to help each progress at his or her own rate.
- ◆ Instruction is modified to the student's rate of learning.
- ◆ The direct instruction method has been studied for 40 years and is used in all grade levels for mathematics and English.
- ◆ Everyone remembers the alphabet, numbers, and the multiplication tables from rote activities learned at a younger age.

ENVIRONMENTALIST THEORY: DISADVANTAGES

Would these children be considered hyperactive?

- ◆ Children who cannot or will not follow instructions from the teacher are not successful in this curriculum and may be considered learning disabled.
- ◆ Children placed in slower or lower-level learning groups may experience “labeling” from other children.
- ◆ Hyperactive children have difficulty remaining at desks and listening quietly in environmentalist learning activities.



CONSTRUCTIVIST THEORY: ADVANTAGES

Name the learning centers in this picture of a kindergarten classroom.

- ◆ Classrooms are divided into learning centers with appropriate manipulative materials that allow students freedom of movement.
- ◆ 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.
- ◆ The schedule allows time for teachers to ask open-ended questions of the children.



CONSTRUCTIVIST THEORY: DISADVANTAGES

- ◆ It may not prepare a child for the traditional teacher-centered kindergarten.
- ◆ Because children are encouraged to learn on their own, some children migrate to one learning center without experiencing all areas of learning.
- ◆ Reserved children may not participate in discussions with the instructor or answer open-ended questions about the activities.
- ◆ Developing curriculum around the children's interests may not provide for every individual interest.
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Role-Play Curriculum Theories

Purpose

The purpose of this activity is to role-play curriculum theories.

Objectives

1. Identify the characteristics of one curriculum theory.
2. Identify the advantages and disadvantages of one theory.
3. Write a role-play that includes all group members, including a narrator.
4. Conduct and narrate the role-play, pointing out the advantages and disadvantages of the curriculum theory.
5. Provide feedback on the group role-plays according to the evaluation criteria.

Materials

- ◆ lab sheet
- ◆ writing utensil
- ◆ computer with Internet access (for additional research)
- ◆ paper for the narrator
- ◆ props as needed for the role-play

Procedure

1. Divide into three groups (or six groups if the class is large).
2. As a group, select one of the major curriculum theories shown in the included table.



Curriculum Theory	Preschool Teacher & Student Actors	Narrator
Maturation theory		
Environmentalism theory		
Constructivist theory		

2. As a group, research, plan, organize, and rehearse a minimum of three scenes that demonstrate preschool students and teachers in the major curriculum theory chosen. Every group member must be represented in one or more scenes. The narrator is the only one speaking during the role-play scenarios.
3. During the role-play presentation, the narrator:
 - a. Describes the curriculum theory
 - b. Identifies the various activities
 - c. Points out and describes advantages and disadvantages of the curriculum theory
4. Role-play presentations will be in the order listed in the table.
5. Project evaluation will include:
 - a. Completeness of the description of the curriculum theory
 - b. Accurate identification of the advantages and disadvantages
 - c. An engaged and cooperative group effort by the narrator and actors
6. Present your role-play, and ask for feedback.