

**WEBSTER UNIVERSITY
COURSE SYLLABUS**

NOTE: The syllabus is subject to change in response to student needs and topics of interest that emerge.

ECED 5510.01 Cognitive Development: Implications for Early Childhood Education

Fall 2004 Term 2

Dr. Cheryl Breig-Allen

Tuesday 5:00-9:00

Webster Hall 324

COURSE DESCRIPTION (Student Focus, Rationale, Scope)

This course focuses on the cognitive development of children birth to eight years of age. An introduction and comparison of various cognitive developmental theories are explored. An in-depth examination of Piaget, Vygotsky and recent discoveries in brain research is conducted through readings and observations. Emphasis is placed on a constructivist theory, which includes the cognitive, representational, physical domains. An examination of the interrelationships among these domains with the framework of a developmentally appropriate curriculum for infants, toddlers and young children demonstrating typical and atypical development is an important factor of this course. The application of technology and its use with young children is incorporated throughout the course. Information from Project Construct is used as a model in examining curricular implications and implementation.

LEARNING OUTCOMES (Goals and Objectives)

1. Compare and contrast various theories of cognitive development (MoStep 2d).
2. Understand the psychological and biological perspectives of cognitive development (MoStep 2a).
3. Understand the cognitive development of infants and toddlers (MoStep 2a).
4. Understand the cognitive development of preschoolers (MoStep 2a).
5. Understand the cognitive development of primary grade children (MoStep 2a).
6. Understand and apply a constructivist theory in the development of an appropriate math and science curriculum and methodology fostering logico-mathematical, physical, scientific and conventional knowledge (MoStep 1a, 1b, 1e, 4a, 5b).
7. Understand and apply a constructivist theory in the development of an appropriate language, language arts, literacy, and fine arts curriculum and methodology fostering symbolic and language development (MoStep 1a, 1b, 1e, 4a, 5b).
8. Understand and apply a constructivist theory in the development of an appropriate perceptual motor, sensory integration curriculum and methodology (MoStep 1e, 2d, 4b).
9. Understand and apply a constructivist theory in the development of an appropriate curricula and methodology to meet the learning needs of all children including those with disabilities (MoStep 1e, 2d, 4b, 5b).
10. Understand and use technology as a tool to support student learning (MoStep 3b, 5a, 7c).

TEXTS

Copley, J. (2000) The young child and mathematics. NAEYC.

Helm, J.H. & Katz, L. (2001) Young investigators: The project approach in the early years. NAEYC.

Neuman, Copple, & Bredekamp (2000) Learning to read and write. NAEYC.

Additional readings may be distributed during class sessions. Be prepared to discuss readings in class.

COURSE REQUIREMENTS

Sensorimotor Project (Due 11/16)

Students will observe two children, the first an infant 3 to 12 months of age and the second a toddler 13-18 months of age. Using the "Stages of Jean Piaget handout provided, students will provide evidence to determine each child's substage level of development and discuss implications for learning.

Preoperational Project (Due 11/30)

Students conduct conservation experiments with two sets of children (3-5) and (6-8). In each case they will select two conservation experiments to perform with two children. They will record the procedures used in as much detail as possible, including verbalizations, results, interpretation of results and comparison between the two children. Students will discuss their analysis of each child's logical mathematical and preoperational development, including the rationale for these decisions and implications for future learning.

Curriculum Project (Due 12/14)

Students will design, implement, document and then analyze a series of learning experiences for a small or large group of children incorporating a constructivist philosophy. The curriculum is to integrate disciplines and must include math, science, social studies, language/literacy, art/construction, music and movement following the project approach. Students will submit a reflection paper using the following framework to reflect upon their work with the children. Papers will be evaluated in terms of the quality of thought, organization, and integration of resources.

Goals/Hypotheses/Questions:

- What do you intend for children to learn? What will they gain from this experience?;
- What questions do you have about children's learning processes and thoughts that might be answered through this experience?; and
- You may identify potential learning outcomes in a more specific way through the statement of objectives.

Projected Plans, Strategies, and Procedures:

- Selection and organization of materials, tools, and containers to be used by children;
- Organization and preparation of the environment (Consider time, flow of activity, organization of furniture arrangement of teacher and children in space, etc.);
- Preparation of children and/or parents (e.g., note sent home about upcoming study or a note to request that the child bring something or do something in preparation for the experience);
- Selection of children who will participate;
- Questions, comments, or memories that you might share with children to help them reflect and reconnect with prior learning or experiences that are related to the experience at hand;
- Procedures.

Plans for Documentation and Assessment:

- What kinds of documentation will enable you to examine behavior and achievements related to the goals, hypotheses, questions, and/or intended learning objectives?;
- What methods of observation would be most useful and feasible (e.g., running records, time sampling, interviews, video recording, audio recording, or photographs)?;
- What tools/technology is needed? (e.g., video camera, tape recorder, paper and pencil, clip boards, still camera)?;
- Who will collect or record the observations?; and
- How will you coordinate your plans with other teachers?

Reflection and Implementation:

- Examine documentation/assessment data;
- Reflect upon and analyze these records in regard to the goals, hypotheses, questions, and/or intended learning objectives; and
- Look for other significant outcomes that may have been unanticipated.

Possible Implications for Future Work with These Children and Future Teaching Situations:

- Discuss possible implications for future work with these children.
- Discuss what you learned that might be applied in future teaching situations.

ATTENDANCE

Regular attendance will be taken and penalties imposed for excessive absences. A no credit is given to anyone missing more than one class.

WRITTEN WORK

Assignments are due at class time on the date specified. Failure to turn in a paper on time can result in a penalty of one grade. Assignments are expected to be free of mechanical, typographical, grammatical, and spelling errors.

READING AND CLASS PARTICIPATION

Reading assignments will be given for each class. Chapters from texts should be read prior to class lecture and discussion on that topic. Students are responsible for all materials for all materials as assigned. Class participation is strongly encouraged as we all have experiences from which others can learn. We need to build and construct our knowledge as we proceed through this course.

COURSE CALENDAR

- 10/26 Introduction to course, content, and expectations. Get acquainted and develop a profile of the class as individual and group learners (questions and concerns). Various theories of cognitive development will be discussed. These include Gesell, Freud, Skinner, Montessori, Piaget, Vygotsky, Gardener, and recent findings in brain research.
- 11/2 Cognitive development in infants and toddlers.
Prenatal development-critical periods.
Infant perception
Sensorimotor development according to Piaget
Curricular issues related to infants and toddlers.
- 11/9 Preoperational development.
Physical knowledge.
Curricular issues related to teaching science.
Logical-mathematical knowledge.
Curricular issues related to teaching math.
Read Copley, chapters 5, 6, 7, 8 and 9
- 11/16 Introduction to the Project Approach.
Representational development.
Curricular issues related to teaching art and music.
Integrating the curriculum.
Read Helm and Katz.
Sensorimotor Project due

- 11/23 Language development
Curricular issues related to literacy and the language arts.
Read Neuman, Copple & Bredekamp, sections 2 and 3.
- 11/30 Perceptual development
Sensory integration issues
Curricular issues related to teaching children with special needs.
Preoperational Project due
- 12/7 Student presentations of curriculum projects.
12/14 **Curriculum Projects due 12/14**