

## **SUBAREA I.**

## **KNOWLEDGE OF CHILD DEVELOPMENT**

### **Competency 001 Understand child development from prenatal through the early elementary years**

#### **Skill 1.1 Major theories of child development and learning (e.g., Piaget, Erikson, Kohlberg, Bronfenbrenner, Vygotsky, brain research)**

Some of the most prominent learning theories in education today include brain-based learning and the Multiple Intelligence Theory. Supported by recent brain research, brain-based learning suggests that knowledge about the way the brain retains information enables educators to design the most effective learning environments. As a result, researchers have developed twelve principles that relate knowledge about the brain to teaching practices. These twelve principles are:

- The brain is a complex adaptive system
- The brain is social
- The search for meaning is innate
- We use patterns to learn more effectively
- Emotions are crucial to developing patterns
- Each brain perceives and creates parts and whole simultaneously
- Learning involves focused and peripheral attention
- Learning involves conscious and unconscious processes
- We have at least two ways of organizing memory
- Learning is developmental
- Complex learning is enhanced by challenged (and inhibited by threat)
- Every brain is unique

*(Caine & Caine, 1994, Mind/Brain Learning Principles)*

Educators can use these principles to help design methods and environments in their classrooms to maximize student learning.

The Multiple Intelligence Theory, developed by Howard Gardner, suggests that students learn in (at least) seven different ways. These include visually/spatially, musically, verbally, logically/mathematically, interpersonally, intrapersonally, and bodily/kinesthetically.

## ***Jean Piaget***

Jean Piaget, a European scientist who died in the late 20<sup>th</sup> Century, developed many theories about the way humans learn. Most famously, he developed a theory about the stages of the development of human minds. It's very simple. The first stage is the "sensory-motor" stage that lasts until a child is in the toddler years. In this stage, children begin to understand their senses.

The next stage, called the "pre-operational" stage, is where children begin to understand symbols. For example, as they learn language, they begin to realize that words are symbols of thoughts, actions, items, and other elements in the world. This stage lasts into early elementary school.

The third stage is referred to as the "concrete operations" stage. This lasts until late elementary school. In this stage, children go one step beyond learning what a symbol is. They learn how to manipulate symbols, objects, and other elements. A common example of this stage is the displacement of water. In this stage, they can reason that a wide and short cup of water poured into a tall and thin cup of water can actually have the same amount of water.

The next stage is called the "formal operations" stage. It usually starts in adolescence or early teen years and it continues on into adulthood. This stage is what allows critical thinking, hypothesis, systematic organization of knowledge, etc.

Generally, when we say that children move from a stage of concrete thinking to logical and abstract thinking, we mean that they are moving from the "pre-operational" and "concrete" stage TO the "formal operations" stage. But as anyone who spends time with children knows, there are many bumps in the way to a person's ability to be a strong critical thinker. And remember, just because a child has moved into a particular stage does not mean that they will be able to complete function at the specified level. For example, adolescents may be able to think critically, but they need plenty of instruction and assistance to do so at an adequate level. This does not necessarily mean that critical thinking skills should be taught out of context; rather, through all lessons, teachers should work to instill components that help develop the thinking of children.

## ***Benjamin Bloom***

In 1956, Benjamin Bloom, an educational psychologist developed a detailed classification of critical thinking and learning skills/objectives into tiered levels. These hierarchal levels ordered thinking skills from the simplest (or lower-ordered) thinking skills to the highest (or higher-ordered) thinking skills. The goal of Bloom's taxonomy was to motivate teachers to teach at all levels of critical thinking and not just at the most common level – the lower-ordered thinking skills such as memorize, restate, define.

The six levels of Bloom's taxonomy and the skills each entails, from simplest to most complex, are as follows:

1. **Knowledge:** This level is the most basic level of learning where students learn terminology and specific facts; tasks at this level ask students to define, label, recall, memorize, and list
2. **Understanding/Comprehension:** This level of learning requires students grasp the meaning of a concept; tasks at this level ask students to classify, explain, identify, locate, and review
3. **Application:** This level of learning requires students to take previous learning and utilize it in a new way; tasks at this level ask students to demonstrate, illustrate, distinguish, solve, write, choose, and dramatize
4. **Analysis:** This level of learning involves the breakdown of material to its component parts and requires students to utilize those parts; tasks at this level ask students to calculate, categorize, compare, contrast, criticize, distinguish, examine, and experiment
5. **Synthesis:** This level of learning requires students to take the analyzed parts from the previous level and converge them into creative new wholes; tasks at this level ask students to collect, compose, design, manage, plan, organize, and formulate
6. **Evaluation:** This is the highest level of learning on the taxonomy, and according to research, is the level that is least often achieved. This level of learning requires students to judge the value of material based on experience, prior knowledge, opinions, and/or the resulting product; tasks at this level ask students to assess, appraise, predict, rate, support, evaluate, judge, and argue

## **Lawrence Kohlberg**

Lawrence Kohlberg outlined what is now known as “Kohlberg’s stages of moral development” in 1958. Kohlberg’s six stages are grouped into three levels: pre-conventional, conventional, and post-conventional. Each level consists of two stages according to Kohlberg.

- Pre-conventional (Egocentric: up to age 9)
  - Punishment/obedience: morality is based on established rules. Children in this stage see that following the rules and/or avoiding negative consequences defines moral behavior
  - Instrumental purpose: In this stage, whatever satisfies the child’s needs is considered moral by that child
- Conventional (Socio-centric: age 9 to adolescence)
  - Interpersonal: Children begin to understand that good behavior is expected, and achieving those expectations is moral
  - Social system: Adolescents at this stage understand that there is a need for them to fulfill obligations and expectations, and that this fulfillment constitutes moral behavior
- Post-conventional (adulthood)
  - Social contract: We understand that various cultures, as well as individuals, have different definitions of morality, and good moral behavior is seen as living up to the moral standards of that person’s social norm
  - Universal Ethical Principles: At this stage, reasoning is based on ethical fairness, and individuals are able to judge themselves and others based on their own sense of morality

For additional reference

[http://allpsych.com/psychology101/moral\\_development.html](http://allpsych.com/psychology101/moral_development.html)

<http://www.utmem.edu/~vmurrell/dissertation/Kohlberg.htm>

## **Erikson**

Eric Erikson articulated a theory that humans go through eight stages of development as they go from infancy to adulthood. These stages are:

- Infancy to 12 months

During this phase the young child develops the ideas of trust and mistrust. This is evident when the child can’t lose sight of the mother or cries when strangers get too close. One has to slowly approach a baby of this age in order to let the child learn whether or not the person is to be trusted.

- Young Childhood - Ages 1 to 3

During this stage, the child develops feelings of shame and doubt along with learning about autonomy. The child wants to be independent and if denied, this could translate into temper tantrums as he tests the adults in charge. Play of all kinds is very important as the child learns the language and self-control.

- Early Childhood – Ages 3 – 5

Here the child learns how to initiate tasks and carry them out. However, the child also learns the quality of guilt in this stage when tasks are not completed. He/She learns how to dream about goals associated with adult life. During this stage the child will begin playing with other children and become aware of the differences between the sexes. There is also some moral development taking place as well.

- Middle Childhood – Ages 6 – 10

The child begins to take pride in work and has a sense of achievement. Friendships develop during this stage as well as learning skills. The child also learns how to act as part of a team.

- Adolescence – Ages 11 – 18

Ego is very important in this stage as the young teen starts to wonder how he/she appears to others. Emotional maturity is very important here as well as physical maturity. Relationships also start to develop with groups and between the sexes.

- Early Adulthood – Ages 18 – 34

This is the stage when people start to develop a sense of isolation and intimacy. Close relationships are formed with others. This is the childbearing stage when stable relationships and work are the focus of attention.

- Middle Adulthood – Ages 35 – 60

A commitment to family and career is the focus of this stage.

- Late Adulthood – Ages 60 – Death

This stage is characterized by ego integrity versus despair. The despair comes into play as one faces the inevitable possibility of death. Many seniors tackle life at this stage as they would if they were younger, remaining active and living a healthy lifestyle, thus maintaining their ego integrity, which makes it easier for them to face death.

### ***Bronfenbrenner***

Urie Bronfenbrenner is regarded as a leader in the field of child psychology and development. In his Ecological Systems Theory, he outlined four types of nested systems. These are:

- Microsystem – family or classroom
- Mesosystem – interaction of two microsystems
- Exosystem – influence of external influences on development
- Macrosystem – the whole socio-cultural context

He later added a fifth system, which he called the Chronosystem, referring to the natural evolution of development.

His approach to human development shows that the development from infancy to adulthood is a natural progression. It helped to break down barriers between disciplines and show a connection between all of them.

### ***Vygotsky***

According to Vygotsky, higher mental functions develop through all the interactions a child has with adults and other children. It is only through these interactions that a child learns his/her language, culture and family background. All of these are essential for normal childhood development. Through the interactions, a child internalizes the concepts of life, family and school.

Vygotsky also did a lot of work on the psychology of play and its importance in child development. He concluded that through play, a child develops the abstract meaning needed to differentiate between objects in the world.

Another of his contributions to the field of early childhood learning was his metacognition theory about speech. He said there is a direct connection between speech and thought, calling thoughts inner speech. Though develops through social interactions and when children think out loud they are externalizes their inner speech.

### ***Constructivist Learning***

The most current learning theory of constructivist learning allows students to construct learning opportunities. For constructivist teachers, the belief is that students create their own reality of knowledge and how to process and observe the world around them. Students are constantly constructing new ideas, which serve as frameworks for learning and teaching. Researchers have shown that the constructivist model is comprised of the four components:

1. Learner creates knowledge
2. Learner constructs and makes meaningful new knowledge to existing knowledge
3. Learner shapes and constructs knowledge by life experiences and social interactions
4. In constructivist learning communities, the student, teacher and classmates establish knowledge cooperatively on a daily basis.

Constructivist learning for students is dynamic and ongoing. For constructivist teachers, the classroom becomes a place where students are encouraged to interact with the instructional process by asking questions and posing new ideas to old theories. The use of cooperative learning that encourages students to work in supportive learning environments using their own ideas to stimulate questions and propose outcomes is a major aspect of a constructivist classroom.

### ***Other Theories***

The metacognition learning theory deals with “the study of how to help the learner gain understanding about how knowledge is constructed and about the conscious tools for constructing that knowledge” (Joyce and Weil 1996). The cognitive approach to learning involves the teacher’s understanding that teaching the student to process his/her own learning and mastery of skill provides the greatest learning and retention opportunities in the classroom. Students are taught to develop concepts and teach themselves skills in problem solving and critical thinking. The student becomes an active participant in the learning process and the teacher facilitates that conceptual and cognitive learning process.

Social and behavioral theories look at the social interactions of students in the classroom that instruct or impact learning opportunities in the classroom. The psychological approaches behind both theories are subject to individual variables that are learned and applied either proactively or negatively in the classroom.

No single approach will work for every classroom, and a good practice is to incorporate a range of learning styles in a classroom. Still, under the guidance of any theory, good educators will differentiate their instructional practices to meet the needs of their students’ abilities and interests using various instructional practices.

### **Skill 1.2 Development within the cultural context of the family**

Like students, every family is different. There are many different ways families exist today, and it is important for teachers to consider a student’s background when their education is concerned.

#### ***Examples of Issues/Situations***

- Students from multicultural backgrounds: Curriculum objectives and instructional strategies may be inappropriate and unsuccessful when presented in a single format which relies on the student's understanding and acceptance of the values and common attributes of a specific culture which is not his or her own.

- Parental/family influences: Attitude, resources and encouragement available in the home environment may be attributes for success or failure. Families with higher incomes are able to provide increased opportunities for students. Students from lower income families will need to depend on the resources available from the school system and the community. This should be orchestrated by the classroom teacher in cooperation with school administrators and educational advocates in the community.

Family members with higher levels of education often serve as models for students, and have high expectations for academic success. And families with specific aspirations for children (often, regardless of their own educational background) encourage students to achieve academic success, and are most often active participants in the process.

A family in crisis (caused by economic difficulties, divorce, substance abuse, physical abuse, etc.) creates a negative environment which may profoundly impact all aspects of a student's life, and particularly his or her ability to function academically. The situation may require professional intervention. It is often the classroom teacher who will recognize a family in crisis situation and instigate an intervention by reporting on this to school or civil authorities.

Regardless of the positive or negative impacts on the students' education from outside sources, it is the teacher's responsibility to ensure that all students in the classroom have an equal opportunity for academic success. This begins with the teacher's statement of high expectations for every student, and develops through planning, delivery and evaluation of instruction which provides for inclusion and ensures that all students have equal access to the resources necessary for successful acquisition of the academic skills being taught and measured in the classroom.

**SEE also Skill 2.8**

**Skill 1.3 Factors that may facilitate or impede a child's development in various domains**

In an era of academic accountability, all teachers must remember that they are still teaching children, who are whole individuals. While teachers are not substitutes for parents, they certainly do have a responsibility to look out for the well-being of their students. In early elementary school, children are particularly affected by emotional stress within the family, and they are particularly susceptible to emotional harm when they are not cared for in an appropriate manner at home.

While it would be too easy to say that teachers should look out for children who show signs of emotional abuse or emotional neglect, whenever a teacher does notice something unusual in a child's behavior, it is a good idea to look into it. A note of caution, however. Teachers should remember that a student's privacy is extremely important.

Furthermore, teachers should remember that all schools, districts, and states have very specific procedures and laws about the reporting of concerns. Yet, it goes without saying that teachers who see problems should seek an effective intervention.

When children are emotionally neglected or have recently endured family distress, their school work can suffer. First, the level of attention toward school will be greatly reduced. While children may actually think about these things, they may also show signs of jealousy of other children, or they may feel a sense of anger toward other children, the teacher, or their parents. Aggression is a very common behavior of emotionally-neglected children.

When a child has had little verbal interaction, the symptoms can be rather similar to the symptoms of abuse or neglect. The child might have a "deer in the headlights" look and maintain a very socially awkward set of behaviors. In general, such a child will have a drastically reduced ability to express him or herself in words, and often, aggression can be a better tool for the child to get his or her thoughts across.

Although cognitive ability is not lost due to such circumstances (abuse, neglect, emotional upset, lack of verbal interaction), the child will most likely not be able to provide as much intellectual energy as the child would if none of these things were present. But, also, note that the classroom can be seen as a "safe" place by a child, so it is imperative that teachers be attentive to the needs and emotions of their students.

#### **Skill 1.4 How children use play to develop understanding and acquire knowledge**

Too often, recess and play is considered peripheral or unimportant to a child's development. It's sometimes seen as a way to allow kids to just get physical energy out or a "tradition" of childhood. The truth is, though, that play is very important to human development. First, an obvious point, in this country, even though we are very industrious, we believe strongly that all individuals deserve time to relax and enjoy the "fruits of our labors."

But even more importantly, for the full development of children (who will soon be active citizens of our democracy, parents, spouses, friends, colleagues, and neighbors), play is an activity that helps teach basic values such as sharing and cooperation. It also teaches that taking care of oneself (as opposed to constantly working) is good for human beings and further creates a more enjoyable society.

The stages of play development do indeed move from solitary (particularly in infancy stages) to cooperative (in early childhood), but even in early childhood, children should be able to play on their own and entertain themselves from time to time. Children who do not know what to do with themselves when they are bored should be encouraged to think about particular activities that might be of interest.

But it is also extremely important that children play with peers. While the emerging stages of cooperative play may be awkward (as children will at first not want to share toys, for example), with some guidance and experience, children will learn how to be good peers and friends.

Play—both cooperative and solitary—helps to develop very important attributes in children. For example, children learn and develop personal interests and practice particular skills. The play that children engage in may even develop future professional interests.

Finally, playing with objects helps the child to develop motor skills. The objects that children play with should be varied and age appropriate. For example, playing with a doll can actually help to develop hand-eye coordination. Sports, for both boys and girls, can be equally valuable. Parents and teachers, though, need to remember that sports at young ages should only be for the purpose of development of interests and motor skills—not competition. Many children will learn that they do not enjoy sports, and parents and teachers should be respectful of these decisions.

In general, play is an appropriate place of children to learn many things about themselves, their world, and their interests. Children should be encouraged to participate in different types of play, and they should be watched over as they encounter new types of play.