

Stages of Intellectual and Psychosocial Development in Childhood

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Introduction

Children are continually changing physically, intellectually, socially, and emotionally. In psychology, the changes that occur in an individual over time is termed development. There are four primary areas of development:

- Physical growth, which includes how the body grows and the changes in the body's movement.
- Intellectual development, which focuses primarily on thinking skills
- Social development, which is how the child interacts with others such as their family, friends, and teachers.
- Emotional development, consisting of the child's ability to understand and regulate their feelings including anger, happiness, and sadness.

There are two things that influence development: maturation and the environment. Maturation consists of genetically programmed, naturally occurring changes over time. The second influence on development is the environment, including the child's experiences in society. Both maturation and the environment influence development. Furthermore, maturation and the environment influence each other (see Figure 1). For example, a child who is malnourished (the environment) will show slower physical maturation. On the other hand, a child whose intellectual maturation is quicker than other children will find that she will be allowed into more advanced classes than other children.

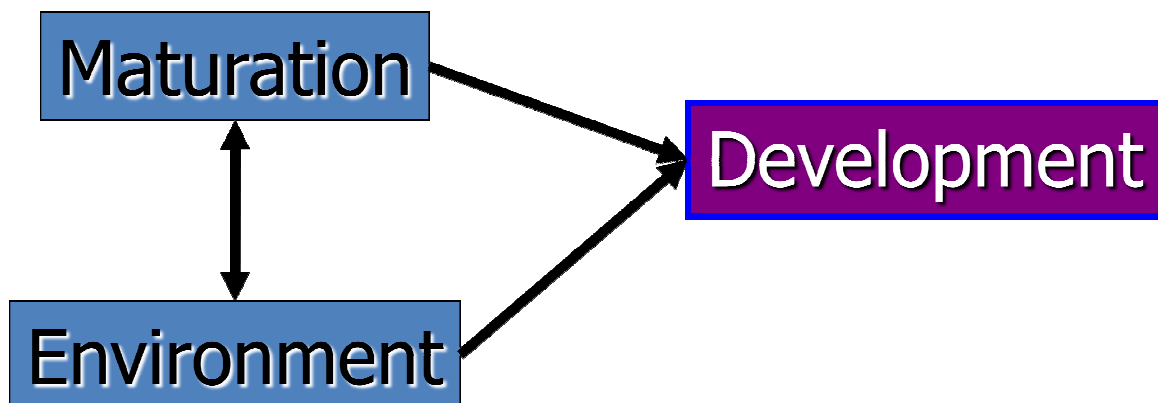


Figure 1. Influence of maturation and the environment on development.

The educator cannot control a child's maturation. However, the teacher does have significant influence over the child's environment. Therefore, teachers should place a strong emphasis on structuring the environment to maximize children's development.

There are three primary aspects of the environment that influences development. First, people such as parents, teachers, other family, friends influence children's development by the opportunities that they expose the children to. Second, events such as schooling, practicals, discussions, and trainings influence children's development through the skills that they help the children develop. Finally, things such as books, technology, and games also help children develop their intellectual, social, and emotional skills. Thus, the purpose of education is to provide opportunities that advance children's development.

When studying development, it is important to think about a few assumptions regarding development. First, young children are active in their development. Children do not passively

wait for their bodies and minds to grow. Instead, they are actively interacting with their environment to develop their physical, intellectual, social, and emotional skills. Second, all individuals of all ages have the capacity for positive developmental change in response to their environment. Since all individuals have the capacity for positive developmental change, this also means that people with a range of disabilities, such as hearing impairment, blindness, and even severe learning disabilities can learn and develop.

The third assumption is that individuals develop at different rates. Some children develop very quickly, while other children develop slowly. Thus, we must remember that age does not determine a child's development. Instead, the skills and abilities that children have developed determine a child's stage in development. Fourth, development is orderly. New skills and abilities build on already known skills and abilities. Therefore, teachers cannot expect students to do something new if they have not mastered the more basic skills. The final assumption regarding development is that development takes place gradually. Therefore, parents and teachers have to be patient with pupils.

Developmental psychologists typically divide the lifespan into eight periods of development, as can be seen from Table 1.

Table 1. Periods of Development

S/No	Name	Timeframe
1	Prenatal	Nine months of pregnancy
2	Infancy and Toddlerhood	Birth through 2 years
3	Early Childhood	2 to 6 years
4	Middle Childhood	6 to 11 years
5	Adolescence	12 to 18 years
6	Young Adulthood	19-30 years
7	Middle Adulthood	31-60 years
8	Old Adulthood	61+ years

For the purposes of this paper, we will focus mostly on early childhood and middle childhood, although we will discuss toddlerhood and adolescence briefly.

Intellectual Development

Infants and Toddlers

Despite the fact that infants and toddlers are typically not in formal schooling, they are learning a great deal through their experiences in their environment. They are learning mathematics through equality. For example, even infants know that if there is one sweet on the table and another sweet is added, there must be two sweets present on the table. Infants and toddlers are also learning literacy through language. Oral language development is the first step in learning to read. As children are exposed to language in their environment, they are learning the foundations of literacy. Finally, infants and toddlers are improving their memory. As they interact with objects in their environment, they develop the ability to remember those objects and how to use those objects.

To help infants and toddlers develop their intellectual skills, parents should frequently talk to and sing to their children to improve their oral language skills. Second, they should provide toys and interesting activities for children to play with to help children improve their memory. Finally, parents should read storybooks with young children. Even infants benefit from

having stories read to them because it improves their oral language skills and helps children develop the practice of reading.

Early Childhood

Early childhood ranges from two to six years. This is typically the period when children enter formal education. There are three primary characteristics of children's thinking abilities in early childhood. First, children use unidimensional reasoning. This means that children can only focus only on one dimension of a problem. If children are given circles, triangles, and squares that are red, blue, and green, they will only be able to sort the objects by shape or by color, not by both. Therefore, tasks must be kept very simple for children in early childhood because it will be impossible for young children to solve a task that has too many parts. Second, children are egocentric. This means that they believe that everyone sees and experiences the world the way that they do. Thus, children will have difficulty taking the perspective of another person. Finally, children in early childhood use private speech. This means that they use language to plan and direct their own behavior, particularly in difficult tasks. Thus, we will frequently hear young children talking to themselves as they are learning, which is perfectly normal.

In early childhood, children are learning many new skills. First, they develop the ability to represent objects with symbols or models. For example, children can symbolize a ball with the word "ball." They also learn that a group of four oranges can be mathematically represented by the word "four." Second, children are developing their vocabulary at a very rapid rate. It is estimated that in this period of development, children learn about seven new words every day. Furthermore, children also begin to learn grammar. In mathematics, children are learning to accurately count large numbers.

In literacy, children at this period are developing what is called emergent literacy skills. These are the skills, knowledge, and attitudes that are developed before formal reading skills. A very important emergent literacy skill is developing an interest in reading. Children also must learn concepts regarding print, such as the ability to carefully and correctly handle a book. Some children may not treat books with care, but parents and teachers need to directly teach children how to care for books. Print concepts also include that a text is read from front to back, top to bottom, and left to right. The ability to identify letters of the alphabet and their associated sounds and oral language skills are also being developed at this period.

Emergent literacy skills are best developed through social experience with literacy activities, not formal instruction. This means that parents and teachers should allow young children to spend plenty of time engaged in meaningful literacy activities, such as reading picture books. At this stage, children learn best by observation and participation, not direct instruction. Therefore, observing parents and teachers as they are reading and participating in the reading process is more effective in teaching emergent literacy skills than a typical school lesson.

At the early childhood period of development, young children still have difficulty paying attention, remembering things, and applying appropriate strategies to solve a problem. Furthermore, since young children have fewer life experiences than their older peers, they also have considerably less knowledge than others.

Young children are gifted learners. However, they should not be expected to learn in the same manner as older children because of their developmental stage and the limitations described above. Instead, at this period of development, play is the primary means by which young children learn. There are five key types of play that help young children learn. First, in constructive play, children use objects to build or construct things. By so doing, children learn

basic rules that govern physical reality, such as gravity and flotation. Second, in first pretend play, children use toys to symbolize real objects. This helps children develop the ability to use symbols. In substitute pretend play, children use objects to stand for something totally different. For example, they might pretend that a stick is a guitar and pretend to make music. Next, in sociodramatic play, children play in cultural roles together with other children. For example, the children may play school with a teacher and pupils. In this type of play, children develop their language and social skills. Finally, in rule-governed play, children learn to play by rules through formal games, such as football. This helps young children learn to follow rules and transition into more systematic thinking.

Play has a number of benefits for young children, including the following:

- Assists in physical development
- Enables children to develop social skills
- Helps children control their emotions
- Allows children to develop more accurate ideas about the world
- Helps children develop abstract symbolism (required for reading and mathematics)
- Enhances children's language skills
- Develops problem solving skills
- Develops creativity

Therefore, to foster intellectual development in early childhood, parents and teachers should allow children plenty of time to play. They should also be gentle in correcting young children because they make many mistakes. Parents and teachers should frequently read to and tell stories with children. In addition to reading and telling stories, parents should discuss the stories to help children improve their vocabulary and comprehension skills. Talking to children and engaging them in discussions also helps improve children's oral language skills. By allowing children to draw and print, children are developing the foundational skills for writing. Finally, parents and teachers should frequently ask children to count and solve mathematical problems with objects. For example, when returning from the market, a parent can ask the child to count the number of tomatoes in the basket, and whether there are more onions or tomatoes. Finally, at this level, it is particularly important that parents and teachers teach for understanding, not memorization. As previously mentioned, young children's memories are still poorly developed and requiring children to memorize will likely be counterproductive.

Middle Childhood

Middle childhood typically ranges from six to eleven years, the years of primary school. In these ages, children are typically learning selective attention. This means that they are developing the ability to focus their attention on what needs to be focused on, not what appears to be most interesting. In middle childhood, children are also improving both their memory skills and thinking speed. Thus, they can remember more information and make decisions more quickly than in early childhood. Finally, because of they have more experiences than younger children, these children have more general knowledge than previously.

In middle childhood, children are also developing the five primary skills that are required for good reading ability. The first reading skill is phonemic awareness, the ability to recognize and manipulate the sounds (phonemes) in spoken words (e.g., man is made up of the sounds /m/ /a/ /n/). Second, phonics is the ability to link letters with their corresponding sounds (e.g., the letter m makes the mmm sound). Fluency is the ability to read a text quickly, accurately, and

with proper expression. Vocabulary knowledge, the knowledge of the meaning of words, is also very important for good reading ability. Finally, comprehension is the ability to understand what is read, which really is the main point of the ability to read. Teachers should make an effort to teach all five of these skills in primary school.

However, in middle childhood, children still have difficulty with abstract thought which is the ability to think about things that are not directly experienced. They also struggle with focusing on multiple aspects of a problem, and systematically solving problems.

When teaching children in middle childhood, it is important to focus on helping children engage in meaningful learning, which means that the concept being taught is fully understood by student. The opposite of meaningful learning is rote memorization whereby the learner simply memorizes the new concept verbatim, using the same language that the teacher used to teach the concept. For meaningful learning to occur, the new information must be related to what students already know. On the other hand, rote memorization will always happen when teachers do not attempt to connect the new information to the learner's prior knowledge.

To foster intellectual development in middle childhood, it is important to use concrete objects to demonstrate concepts. Children have not yet developed the ability to think abstractly, so the use of instructional materials is very important so children can see and manipulate what is learnt. Teachers can also use analogies to illustrate what is taught. An analogy is a comparison between two objects. Thus, teachers use analogies when a new concept is related to a similar concept that is well-known to the learners. For example, Jesus used many analogies when he was teaching, such as saying that Christians are the light of the world. That simple comparison of a Christian to light has a depth of meaning that can be communicated using the simple tool of an analogy.

To make new concepts concrete, teachers can also tell stories to demonstrate concepts. Asking students for their relevant experiences is also a powerful way to help children learn. This allows students to relate what is learnt to their prior experiences and everyday lives. Teachers should also give students many examples and practice activities to develop their skills. Another strategy is to ask students questions beyond what has been directly taught. This will help learners to expand on what has been learnt and help the teacher know what the student understands by the lesson. Making students explain their reasons for their answers will also help students engage in meaningful learning. To do this, the teacher should frequently ask students "Why?" Finally, teachers can help students engage in meaningful learning by answering questions with questions to help students think for themselves.

Adolescence

In adolescence, students are learning to think abstractly. They also can begin to systematically plan solutions to a problem, which is helpful particularly in scientific experimentation. Finally, adolescents are beginning to apply appropriate strategies to learning. In other words, they begin to be strategic about their studying methods.

To help adolescents develop intellectually, teachers should make lessons relevant to students' lives. At this stage, education is particularly focused on helping adolescents become productive members of society, so it is important to ensure that what is taught will be applied to students' future roles as citizens. Assignments should also be made practical and interesting. Teachers should give students choice when appropriate to help students learn to regulate their studying and learning. Finally, teachers should directly teach study skills to the learners, such as how to take notes and review one's notes.

For example, one study strategy is SQ3R. This acronym stands for Survey, Question, Read, Recite, and Review (3 R's).

- Survey: Survey the notes or chapter to find the key points.
- Question: Turn the key points into questions.
- Read: Carefully read to find the answers to the questions.
- Recite: Recite the answers to the questions without looking at the notes.
- Review: Review the answer with the notes. If the answer is not correct, reread until the answer is clear.

Social and Emotional Development

Research has demonstrated that social skills are associated with school. Social skills, the ability to relate with others, and emotional skills, the ability to regulate one's emotions, are closely related. Research has shown that teachers strongly influence young children's social and emotional development. Social and emotional skills are necessary for children to be successful in school and society. Therefore, teachers, particularly teachers of young children, should make an effort to directly teach social and emotional skills. Teaching social skills can also prevent behavior problems.

Important social skills include the following:

- Making friends
- Sharing and helping
- Cooperation
- Respecting rules
- Conflict resolution
- Communication skills, including active listening, nonverbal skills, and polite communication skills

Social and emotional skills can be taught in three ways. First, formal curriculums can be purchased from educational companies, such as I Can Problem Solve. Second, teachers can develop informal lessons to be included as a class activity. These informal lessons may include:

- Songs about social skills
- Noncompetitive games that require cooperation
- Discussions about stories or books with social themes
- Puppets who model social skills
- Role plays. Role plays are dramas about a specific social situation, which allows children to practice social skills in a playful fashion

The third way that social and emotional can be taught is to use the "teachable moments" when a situation arises in the class where more advanced social skills are necessary. In these situations, teachers can directly teach the necessary social and emotional skills that are required to positively resolve the situation. However, teachers should be careful to not only teach social skills in crisis situations. First, the problem has already happened. The child is upset, and the teacher may be inadvertently reinforcing the negative behavior by drawing attention to the child who misbehaved. Therefore, lessons on social and emotional skills should be worked into the class routine.

There are three key emotional skills that young children must learn. First, they should learn to recognize and label their feelings. Teachers can help young children do this by asking them questions, such as, “Are you feeling _____?” Second, young children need to learn to accept their feelings. For example, young children should learn that it is perfectly normal to feel hurt when their friend ignores them. Finally, teachers need to help encourage appropriate responses to children’s feelings. When children misbehave, teachers can help children identify better strategies for dealing with their feelings.

An example lesson to teach emotional skills to young children is to show pictures of a face displaying a specific emotion. Then the teacher can ask questions about that emotion, such as:

- What does this face mean?
- What are things that make you feel this way?
- What can you do to make others feel this way?

An important emotional skill that is difficult for young children to learn is that of managing anger. Children must learn that anger can interfere with problem solving. They should learn how to recognize anger in themselves and their peers, how to calm down, and appropriate ways of expressing their anger. The Turtle Technique as presented in Figure 2 can help young children manage their anger.

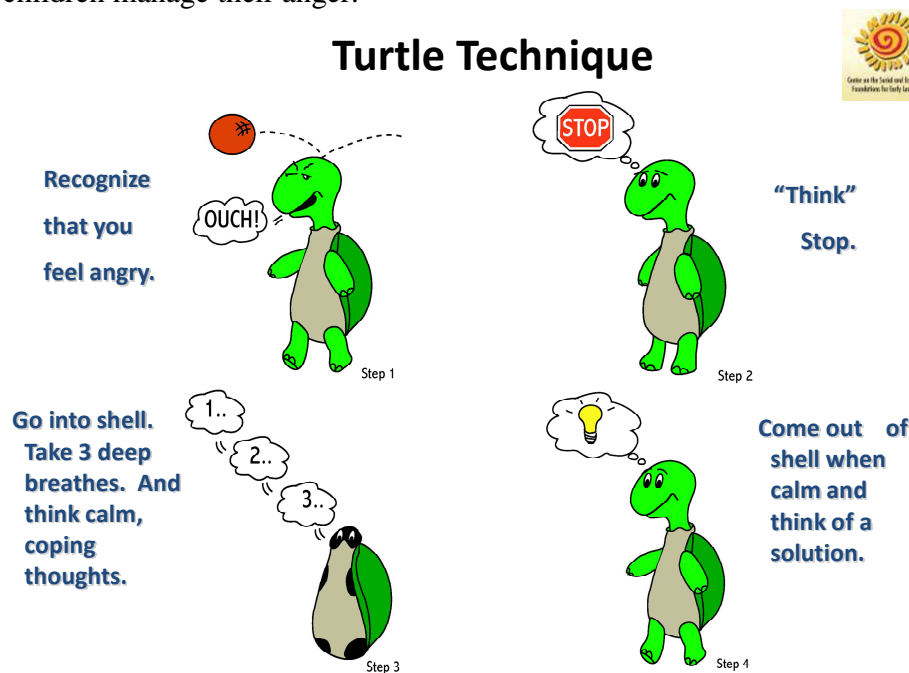


Figure 2. Turtle Technique for Managing Anger.

Developmentally Appropriate Practice

Early childhood teachers often talk of teaching using developmentally appropriate practice. This means that instruction is focused on the developmental level of the pupil. Teaching methods and classroom environment should be based on the developmental stage of the children within the class. For example, the classroom environment for young children should be filled with toys and colorful decorations to help them learn. However, the classroom environment for

older children will not need these things. Adjustments to educational practice must be made to reflect the strengths and weaknesses of the developmental stage of the learners in the classroom.

There are three key principles for using developmentally appropriate practice. The first is that knowledge must inform teaching. Teachers must have knowledge about development and learning, knowledge of each child as an individual, and knowledge of the social and cultural contexts in which the children live. The classroom environment should reflect that knowledge.

The second key principle of developmentally appropriate practice is that the classroom goals must be challenging and achievable. To do this, the teacher should build on what the child already knows and can do. The final principle is that teachers must be intentional in everything they do to ensure that all classroom practices match the developmental level of the learners.

The following are key characteristics of developmentally appropriate practice:

- Focus first on the developmental abilities of students, not on what must be taught.
- Learning is viewed as an active process.
- Development in all aspects of children's development are considered in the classroom environment: physical, cognitive, social, and emotional.
- Parents are actively involved in the educational process.
- Individuals learn best when they have secure, consistent relationships with adults.
- New development must build on prior abilities, skills, and knowledge.
- Development advances when children are challenged just above their current mastery and have many opportunities to practice newly acquired skills.
- Early experiences have profound effects on later development and learning. This means that nursery and primary school teachers are the most important teachers in the entire school system!
- All people, particularly children, learn best when taught with a wide variety of strategies.
- Play is an important tool for developing language, thinking skills, and social skills and is essential in active learning for children.

Internet Resources

Center on the Social and Emotional Foundations for Early Learning at the *What Works Briefs* presents scientific evidence for best practices in promoting young children's emotional development: <http://www.vanderbilt.edu/csefel/>

Activities to promote development for young children:

<http://www.teacherquicksource.com/headstart/default.aspx>

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