

COMPETENCY 1.0 KNOWLEDGE OF CHILD GROWTH AND DEVELOPMENT

Skill 1.1 Identify the major effects of genetics, health, nutrition, public policy, environment, and economics on child development

In today's push toward academic achievement and standards, we often forget the importance of a child's emotional and physical growth and health. New teachers may be tempted to teach more or harder for fear that, if they don't, their students will not learn. Yet, both new and veteran teachers must remember that child development plays a critical role in the academic success of individuals.

While all children develop at different rates and every child has unique attributes, teachers have some responsibility for raising concerns about the emotional or physical states of their students. In the presence of abuse, this responsibility is a legal one, but other concerns may also merit discussion with counselors or administrators.

Genetics

Genetics plays an important role in a child's development, affecting many attributes to their ability to learn. Genetics accounts for many factors of a student's learning including IQ level, which methods of learning (for example, visual, auditory, kinesthetic, etc) work best for individual children, and learning exceptionalities and disorders. How much genetics affects student learning varies, and research is continually being completed to uncover how strongly genetics affects a student's intelligence and predisposition to certain conditions.

Intelligence Quotient

One's Intelligence Quotient, or IQ, is a score that comes from one of several standardized tests designed to measure intelligence. These tests are used as predictors of educational achievement and children with low scores are often placed in special needs classes or receive help from paraprofessionals both inside and outside the school. Although there are factors that affect one's IQ, such as the family and maternal environment, disease, and injury, there is overwhelming proof from the research that genetics plays a large part in determining a child's IQ. Researchers originally thought that IQ would improve as the child got older, but the results show that the IQ actually lessens with age.

Neurotic Disorders

Emotional disorders can seriously hamper a child's normal development. When a child is experiencing trauma or emotional stress of some kind, this causes the child to become nervous and afraid of the simplest things. Thus the child will shy away from some experiences that could be very educational and necessary for social, emotional and moral development.

Sometimes emotional disorders escalate so quickly and become so severe that the child's well-being is threatened. Teachers and parents must recognize the signs of severe emotional stress that may be detrimental to the child. Various forms of emotional disorders, including neurosis, are potentially dangerous. Neuroses are the second most common group of psychiatric disturbances of childhood, and symptoms include extreme anxiety related to over dependence, social isolation, sleep problems, unwarranted nausea, abdominal pain, diarrhea, and headaches.

Some children exhibit irrational fears of particular objects or situations; others become consumed with obsessions, thoughts, or ideas. Depression is one of the most serious neuroses. The child is sad, cries, shows little or no interest in people or activities, has eating and sleeping problems, and sometimes talks about wanting to be dead. Teachers must listen to what the child is saying and take these verbal expressions very seriously. Perhaps what happened at Columbine, Colorado; Jonesboro, Arkansas; and Lake Worth, Florida could have been prevented if adults had recognized the signs.

For more information on neurotic disorders in childhood:

<http://www.depression-guide.com/child-psychiatry/childhood-disorder.htm>

Psychotic Disorders

Psychosis, which is characterized by a loss of contact with reality, is an even more serious emotional disorder. Psychosis is rare in childhood, but when it does occur, it is often difficult to diagnose. One fairly constant sign is the child's failure to make normal emotional contact with other people. The most common psychosis of childhood is schizophrenia, which is a deliberate escape from reality and a withdrawal from relationships with others. When this syndrome occurs in childhood, children continue to have some contact with people; however, a curtain exists between them and the rest of the world. Schizophrenia is more common in boys than in girls. A habitually flat or agitated facial expression is one of the major signs of this disorder. Children suffering from schizophrenia are occasionally mute, but at times they talk incessantly and use bizarre words in ways that make no sense. Their incoherent speech often contributes to their frustration and compounds their fears and preoccupations and is the most significant sign of this very serious disturbance.

Read more about psychotic disorders:

<http://www.webmd.com/schizophrenia/guide/mental-health-psychotic-disorders>

Early Infantile Autism

Unlike genetic disorders, research has not supported hereditary links to having this disorder. Early infantile autism may occur as early as the fourth month of life. Suddenly the infant lies apathetic and oblivious in the crib. In other cases, the baby seems perfectly normal throughout infancy, and the symptoms appear without warning at about eighteen months of age. Because of the nature of the symptoms, autistic children are often misdiagnosed as mentally retarded, deaf-mute, or organically brain-damaged. Boys are twice as likely to be autistic as girls.

According to many psychologists who treat autistic children, these children seem to have built a wall between themselves and everyone else, including their families and even their parents. They do not make eye contact with others and do not appear to hear those who speak to them. They cannot empathize with others and cannot appreciate humor.

Autistic children usually have language disturbances. One third of them never develop speech at all but may grunt or whine. Others may repeat the same word or phrase over and over or parrot what someone else has said. They often lack inner language as well and cannot play by themselves above a primitive, sensory-motor level.

Frequently, autistic children appear to fill the void left by the absence of interpersonal relationships with a preoccupation with things. They become compulsive about the arrangements of objects and often engage in simple, repetitive physical activities with objects for long periods of time. If these activities are interrupted, they may react with fear or rage. Others remain motionless for hours sometimes moving only their eyes or hands.

On intelligence tests, autistic children score from severely subnormal to high average. Some, while functioning poorly in general, exhibit astonishing ability in isolated skill areas. They may be able to memorize volumes of material, sing beautifully, or perform complicated mathematical problems.

The cause of early infantile autism is unknown. Years ago some psychiatrists speculated that these children did not develop normally because of a lack of parental warmth. Since the incidence of autism in families is usually limited to one child, experts now think this cause is unlikely. Other theories include metabolic or chromosomal defects as causes; however, no evidence substantiates these theories.

The prognosis for autistic children is discouraging. Only about five percent of autistic children become socially well adjusted in adulthood. Another twenty percent make fair social adjustments. The remaining seventy-five percent are socially incapacitated and must be supervised for the duration of their lives. Treatment may include outpatient psychotherapy, drugs, or long-term treatment in a residential center, but neither the form of treatment nor the lack of treatment seems to make a difference in the long run.

Find out more about autism:

http://en.wikipedia.org/wiki/Early_infantile_autism

Factors of a Student's *Environment*

Generally, teachers and parents should know what specific attributes develop over time in children. There is usually no cause for alarm, as many children do develop later in childhood (and certain domains may develop later than others). Concern regarding intervention might arise when teachers notice that certain functions or attributes seem abnormally absent. In such a case, certain tasks may be very difficult for a child. Later in childhood, a large concern of teasing and bullying may arise, and the teacher may want to ensure that the child is fully protected.

When in doubt, though, the teacher should privately discuss the concern with a special education teacher or school psychologist first. That professional may be able to assist the teacher in determining whether it would be important to evaluate the child, or whether it would be important to contact the parent to ask questions, seek clarification, or point out a potential delay.

Very often, though, parents will be aware of the delay, and the child will be able to receive special accommodations in the classroom. Teachers should be forewarned about this by the special education personnel prior to the beginning of the school year.

For further reading on how environment affects child development:

http://www.schoolfile.com/cap_start/childdevelopment.htm

Emotional Factors

In early elementary school, children are particularly affected by emotional upsets in family structure, 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 might be a good idea to look into it. A note of caution, though: 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 figure out procedures for dealing with them.

When children are emotionally neglected or have recently endured family upsets, what sorts of things would this impact in a child? Well, 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.

Behavioral Factors

The home environment and even the neighborhood can have an affect on the development of children and cause them to come to school with behavior problems. Recent studies indicate that children from neighborhoods where there are few affluent families tend to exhibit more more behavioral issues in school than those who do, such as not paying attention, fighting and in general causing disturbances in the class.

There are also issues that do cause children to have behavior problems, such as the mother consuming alcohol while pregnant and an exposure to violence in the home. The teacher has to be very observant of how children behave towards one another in the classroom to rule out any possibilities that some children may be bringing their frustrations with the home environment into the school setting.

Environmental Factors

Environmental factors that can cause delays in the development of some children could include:

- Lead poisoning
- Exposure to contaminants in water, food and air

Because children are exposure to contaminants can be more harmful for them that it is for adults. The body’s systems and organs are still developing and due to the fact that children often out foreign objects in their mouths only adds to the amount of exposure for them.

Sadly, not every student comes from a stable home environment. Legally, teachers and school administrators are required to report abuse. When you suspect abuse, the best action is to contact a superior immediately. However, while the symptoms of abuse are thought to be physical (and therefore visible), mental and emotional abuse is also possible. The impact of abuse on a child's development is often extensive. Abused children can be socially withdrawn, and, as one might suspect, their minds are not always on their schoolwork. Significant emotional damage does occur, and teachers may notice very awkward social behavior around other children and adults.

Familial Factors

The student's capacity and potential for academic success within the overall educational experience are products of her or his total environment: classroom and school system; home and family; neighborhood and community in general. All of these segments are interrelated and can be supportive, one of the other, or divisive, one against the other.

As a matter of course, the teacher will become familiar with all aspects of the system, the school and the classroom pertinent to the students' educational experience. This would include not only process and protocols but also the availability of resources provided to meet the academic, health and welfare needs of students. But it is incumbent upon the teacher to look beyond the boundaries of the school system to identify additional resources as well as issues and situations that will affect (directly or indirectly) a student's ability to succeed in the classroom.

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. The classroom teacher should orchestrate this 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. 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 the ability to function academically. The situation may require professional intervention. It is often the classroom teacher who recognizes a family in crisis situation and instigates 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.

Linguistic Factors

Early theories of language development were formulated from learning theory research. The assumption was that language development evolved from learning the rules of language structures and applying them through imitation and reinforcement. This approach also assumed that language, cognitive, and social developments were independent of each other. Thus, children were expected to learn language from patterning after adults who spoke and wrote Standard English. No allowance was made for communication through child jargon, idiomatic expressions, or grammatical and mechanical errors resulting from too strict adherence to the rules of inflection (childs instead of children) or conjugation (runned instead of ran). No association was made between physical and operational development and language mastery.

In the linguistic approach, studies spearheaded by Noam Chomsky in the 1950s formulated the theory that language ability is innate and develops through natural human maturation as environmental stimuli trigger acquisition of syntactical structures appropriate to each exposure level. The assumption of a hierarchy of syntax downplayed the significance of semantics. Because of the complexity of syntax and the relative speed with which children acquire language, linguists attributed language development to biological rather than cognitive or social influences.

Socio-Cognitive Approach

Under the socio-cognitive approach, theorists in the 1970s proposed that language development results from sociolinguistic competence. Language, cognitive, and social knowledge are interactive elements of total human development. Emphasis on verbal communication as the medium for language expression resulted in the inclusion of speech activities in most language arts curricula.

Unlike other approaches, the socio-cognitive allowed that determining the appropriateness of language in given situations for specific listeners is as important as understanding semantic and syntactic structures. By engaging in conversation, children at all stages of development have opportunities to test their language skills, receive feedback, and make modifications. As a social activity, conversation is as structured by social order as grammar is structured by the rules of syntax. Conversation satisfies the learner's need to be heard and understood and to influence others. Thus, the choices of vocabulary, tone, and content are dictated by the ability to assess the language knowledge of the listeners. The learner is constantly applying cognitive skills to using language in a social interaction. If the capacity to acquire language is inborn, without an environment in which to practice language, a child would not pass beyond grunts and gestures as did primitive man.

Of course, the varying degrees of environmental stimuli to which children are exposed at all age levels create a slower or faster development of language. Some children are prepared to articulate concepts and recognize symbolism by the time they enter fifth grade because they have been exposed to challenging reading and conversations with well-spoken adults at home or in their social groups. Others are still trying to master the sight recognition skills and are not yet ready to combine words in complex patterns.

Cultural Factors

In early childhood classrooms, the teacher must be sensitive to the culture that each child comes from. Culture is individual and the teacher may need to assess the child individually to identify cultural factors that may affect the child's development. Some of the cultural factors that may have an impact on the child's learning in school include:

- Race
- Religion
- Ethnic background
- Socio-economic status
- Gender
- Place of birth
- Language

The beliefs of the parents come through in the child's reactions to experiences in school. The teacher has to be able to determine if there is a cultural problem that may be causing the child to experience a delay in some aspect of development.

Economic Factors

The socio-economic status of the family has a direct bearing on the development of some children. For example a child that comes to school with no knowledge of books or writing could come from a home where there is no extra money for books. It could also be a cultural factor in that the parents are new immigrants and cannot read any of the books published in a different language. Children raised in poverty may not have the proper nutrition they need to develop normally and this could cause medical problems as well. In addition, parents of children with disabilities may not have the monetary means to provide medical care for the children or may not be aware of any social programs available to them within the community.

SEE also Skill 1.5, page **Error! Bookmark not defined..**

Health and Nutrition

Issues of physical health include prenatal exposure to drugs, alcohol, or nicotine. In all cases, moderate to severe brain damage is possible; however, more subtle impairment, such as breathing problems and attention deficit disorder, can also occur. Because drugs, alcohol, and nicotine can impair brain development, children exposed to such substances in the womb may need significant extra classroom support. Some of these children should also be referred to the special education teacher in order to be tested for learning disabilities.

Such day-to-day issues as insufficient sleep or poor nutrition harm children in a more temporal fashion. While a child who has had sleep disruptions or insufficient nutrition can bounce back easily when these deficiencies are corrected, children living in environments where sleep and proper nutrition are not available will struggle for these necessities throughout childhood. Through federal and local funds, many schools provide free or reduced-price breakfasts and lunches for children; however, such children may not get a decent dinner and, during weekends and holidays, may struggle even more.

Symptoms of inadequate nutrition and sleep deficiencies most notably include poor concentration, particularly in the classroom. Furthermore, these children may become agitated more easily than other children.

Teachers should always pay attention to abnormalities in the behavior of children, including sudden drop-offs in achievement or attention, and notify superiors with concerns.