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ASSINGMENT#01

QUESTION#01

Provide an overview of growth and development?

Ans;

OVERVIEW OF GROWTH AND DEVELOPMENT:

The terms growth and development are often used interchangeably or paired up in a rather similar way, which causes ambiguity over their meaning. It is, therefore, important to understand the difference between these two terms right at the outset.

DEFINATION OF GROWTHAND DEVELOPMENT:

Growth is the progressive increase in the size of a child or parts of a child. Development is progressive acquisition of various skills (abilities) such as head support, speaking, learning, expressing the feelings and relating with other people. Growth and development go together but at different rates.

GROWTH:

The term growth implies an addition or increase in the bodily aspects that can be measured, for example, height, weight, size, muscles and length. It is based on biological processes that naturally occur over a period of time and are relatively not or less influenced by context except for extreme illness or undernourishment. It eventually stops when the body parts reach the peak of their growth.

Growth refers to the incremental changes in physical characteristics such as height, weight, size, etc., while development refers to qualitative changes to growth in an orderly and meaningful fashion which results in maturity. Growth and development contribute to each other, are inseparable, and occur simultaneously. For example, most babies, by the time they grow up to be 8 months old, can weigh around 8 to 10

kilograms and can sit up. Nature and nurture both contribute to the growth and development of children.

Overall, growth refers to the natural, spontaneous, specific, genetically programmed and measurable quantitative gains in a human body. Most of the child's physical gains fall within this category. Some of the developmental psychologists also refer to these changes as maturation.

DEVELOPMENT:

While growth refers to the physical changes that an individual undergoes, development refers to certain changes that occur within the life-span of an individual, that is, from conception till death. However, not all changes are considered as development. Rather, it applies to those changes that appear in orderly ways and are considerably permanent.

Development has been described in different ways to highlight different aspects. These include: domains of development and stages of development. While the former emphasizes the processes that characterize development, the later focuses certain age periods to manage the flow of time across child development. The following sections describe each of them in detail.

DOMAINS OF DEVELOPMENT:

The pattern of child development is generally divided into three broad categories including physical, cognitive and socio-emotional development . The physical domain involves biological changes that occur over time. These include changes in body size, proportions, appearance, motor skills, physical health etc. The cognitive domain includes changes in intellectual abilities and skills such as thinking, intelligence, creativity, attention, memory, language etc. Whereas, the socio-emotional domain highlights the processes that relate to the changes in a child's relationships with others, feelings, emotions, values, beliefs, personality etc. The process of child development is quite complex and requires an interaction of several processes including the physical, cognitive and socio-emotional domain. Overall, these domains are interrelated and overlapping.

It is important to note that the domains of child and human development have been classified into a number of different aspects. For example, one classification of child development includes different domains such as the physical, cognitive, language, social and emotional domain.

STAGES OF DEVELOPMENT:

It is believed that an interplay of various domains of development (as discussed in the above section) generate the different stages of child development. Some of the psychologists have used age periods to account for the new capacities, transitions and social expectations in children over the course of time.

IMPORTANCE OF ASSESSING GROWTH AND DEVELOPMENT:

The assessment of growth and development is very helpful in finding out the state of health and nutrition of a child. Continuous normal growth and development indicate a good state of health and nutrition of a child. Abnormal growth or growth failure is a symptom of disease. Hence, measurement of growth is an essential component of the physical examination.

FACTORS EFFECTING GROWTH AND DEVELOPMENT:

Each child's path or pattern of growth and development is determined by genetic and environmental factors. The genetic factors determine the potential and limitations of growth and development. If favorable, the environmental factors, such as adequate nutrition, facilitate the achievement of the genetic potential of growth and development. Unfavorable factors, acting singly or in combination, slow or stop growth and development. Some of the unfavorable factors are malnutrition, infections, congenital malformations, hormonal disturbances, disability, lack of emotional support, lack of play, and lack of language training. To promote optimum growth, these environmental factors can be removed or minimized. Once they are removed, there follows a period of catch-up growth. During this period the growth rate is greater than normal. This growth rate continues until the previous growth pattern is reached. Then the growth rate is reduced to the normal rate determined by the individual's genetic factors. A child genetically determined to be tall grows slightly more rapidly than a child genetically determined to be short. Similarly, a child genetically determined to be clever develops their intellect more rapidly than a child genetically determined to be less intelligent.

QUESTION#02

Physical development is based on genes. Discuss?

Ans:

Physical development is not only specified to the biological and maturational changes that occur over time with little or no influence from the context. Rather, it is believed to occur within an environmental context, where factors such as nutrition, opportunities for play, cultural practices etc. play a significant role.

GENES EXPRESSION:

A human body is composed of trillions of micro units, called cells. Each cell has a core control, named as the nucleus. The nucleus contains rod like structures which are known as chromosomes. The chromosomes come in 23 pairs (one from the father and one from the mother) and carry information about the size, shape and other genetic features inherited from the parents. Overall, they are responsible for the storage and transmission of genetic information from one generation to another.

Whether or not a gene is expressed depends on two different things: the interaction of the gene with other genes and the continual interaction between the genotype and the environment.

Genetic Interactions: Genes can sometimes contain conflicting information, and in most cases, one gene will win the battle for dominance. Some genes act in an additive way. For example, if a child has one tall parent and one short parent, the child may end up splitting the difference by being of average height. In other cases, some genes follow a dominant-recessive pattern. Eye color is one example of dominant-recessive genes at work. The gene for brown eyes is dominant and the gene for blue eyes is recessive. If one parent hands down a dominant brown eye gene while the other parent hands down a recessive blue eye gene, the dominant gene will win out and the child will have brown eyes. Chromosomes comprise of a series of proteins called deoxyribonucleic acid or DNA. DNA has a tendency to duplicate itself through a process, called mitosis. This feature enables chromosomes to copy themselves and produce new cells which have exactly the same pattern of genetic information. Each DNA carries thousands of genes across the length of the chromosomes (Berk, 2013). Genes are the basic units of hereditary transmission. They trigger the production of proteins in response to environmental cues or other genes. These proteins lay the biological foundation for our physical characteristics. Since chromosomes come in pairs (one from each parent), the gene on one

chromosome has an alternate or a partner on the corresponding chromosome. This alternate gene on the corresponding chromosome is referred to as an allele. The relationship between these alleles could be described as dominant or recessive depending on which of them is powerful than the other.

This implies that a combination of genes results in certain traits of the child. Luckily, many harmful traits are coded as recessive by the genes, which reduce the possibility of their genetic transmission

❖ **Gene-Environment Interactions:** The environment a child is exposed to both in utero and throughout the rest of his or her life can also impact how genes are expressed. For example, exposure to harmful drugs while in utero can have a dramatic impact on later child development. Height is a good example of a genetic trait that can be influenced by environmental factors. While a child's genetic code may provide instructions for tallness, the expression of this height might be suppressed if the child has poor nutrition or chronic illness. Contemporary researchers believe that genes (nature) and environment (nurture) interact to manipulate a child's development. This is because they often influence and get influenced from each other to form patterns of development. For example, children's immediate environment is created by their parents. Since parents and children share rather similar genetic structure, it is likely that the environments which parents create for their children would support their genetic traits such as painting, playing soccer etc. Similarly, genes may have an evocative relationship with the environment which helps to reinforce certain inherited traits. On the other hand, environment may also have a critical impact on genetic factors. For example, certain behavioral traits such as cognitive abilities etc change dramatically under supportive/unsupportive conditions. Similarly, different children react differently to their environmental circumstances.

GENETIC ABNORMALITIES:

Genetic instructions are not infallible and can go off track at times. Sometimes when a sperm or ovum is formed, the number of chromosomes may divide unevenly, causing the organism to have more or less than the normal 23 chromosomes. When one of these abnormal cells joins with a normal cell, the resulting zygote will have an uneven number of chromosomes.

Researchers suggest that as many as half of all zygotes that form have more or less than 23 chromosomes, but most of these are spontaneously aborted and never develop into a full-term baby.

Genetic influences have an enormous influence on how a child develops. However, it is important to remember that genetics is just one piece of the intricate puzzle that makes up a child's life. Environmental variables including parenting, culture, education, and social relationships also play a vital role.

QUESTION #03

How can school enhance students' physical development?

Ans:

Physical Development relates to the development of children's body control and coordination of large movements, fine manipulative skills, spatial awareness and balance. It also focuses on children's knowledge and understanding of a healthy lifestyle which physical well-being depends.

Physical development focuses on increasing the skill and performance of the body. Physical and cognitive development are closely linked, especially during the early years. Physical development can be divided into gross motor skills and fine manipulative skills. Throughout the Foundation Phase, children acquire and develop their skills in many ways.

Both growth and development depend on suitable nourishment, a balance of the right foods and sufficient water to drink. Increasing control and coordination is enabled by the maturing brain and nervous system, growing bones and muscles, exercise and physical activity.

Physical activities play a critical role in developing the basic movement skills of children. Since it is difficult for children to work on sedentary activities for longer duration of time, this section presents some ideas about developing physical activities for children in the pre and elementary school years. These ideas can be

modified and expanded in certain other ways to support the physical development of children.

School-age children who stay physically active will strengthen skills such as agility, balance, coordination and endurance. Encourage your child to participate in a sport or activity. These can help to strengthen agility and coordination.

The school-age years are a time of steady growth and development. Staying physically active during this developmental phase will strengthen the fundamental skills needed to lead a healthy and active life as an adult. These skills include, but are certainly not limited to, agility, balance, coordination, and endurance. Learning and developing these skills will also have a tremendous impact on your child's confidence and self-esteem, as well as providing them with an ongoing sense of accomplishment and independence.

Preschool and Kindergarten:

Preschool children are generally aged between three to five years. At this age, children tend to develop sufficient control over their fine motor skills which help them to draw, write, copy shapes and engage in activities that require precise control of hand and body movement. Children at this age learn best through intrinsic interests and physical involvement. Some traditional physical activities for this age level involve running, jumping, hopping, skipping, drawing, coloring, painting, cutting, pasting, gluing, using play dough, rollers, and shape cutters etc. However, teachers, caregivers or parents can certainly extend this network in some non-traditional ways. This may involve using outside play as a reward for children, free play days, dramatic play, role play, sand, wet mud or clay play, collage, cooking, building and relaxation (e.g., stretching, breathing in and breathing out, closing eyes) activities etc. Besides, manipulative activities (e.g., lego, science experiment with magnets) and musical, group and movement activities (e.g., locomotor movements which involve children rapidly moving from place to place, non-locomotor movements which involve children performing while keeping stationary, and manipulative movements which involve children using their body parts to manipulate an object) may provide excellent opportunities for a healthy physical development.

Elementary Level:

The school age children continue to develop their gross and fine motor skills. With this refinement, they become adept at activities which require precise hand and body control, for example, writing. Daily physical activities should be incorporated into

the school routine of elementary school children to maintain active physical development. This can be done in different ways, for example, introducing health and physical education classes and integrating physical activities into other areas of curriculum. Besides physical education classes, there are many other ways in which teachers can engage students in physical activities. These include, for example, allocating some time for physical activity on daily basis, incorporating concepts from other areas of curriculum into physical activity time and vice versa, and providing children with hands-on experiences as much as possible.

The overall goal of such activities should be to make children move their bodies at a moderate or rigorous level of intensity for at least 20 minutes during the school time. Some educationists also argue that engaging students in effective physical activities at elementary school is likely to have a positive impact on their overall health and well-being during adulthood by incorporating a life-style change.

The behaviors and traits of today's children, along with their genetics, are determinants of their growth and development; their physical, mental, and psychosocial health; and their physical, cognitive, and academic performance. Technological advances of modern society have contributed to a sedentary lifestyle that has changed the phenotype of children from that of 20 years ago. Children today weigh more and have a higher body mass index (BMI) than their peers of just a generation. Behaviorally, most children fail to engage in vigorous- or moderate-intensity physical activity for the recommended 60 minutes or more each day, with as many as one-third reporting no physical activity in the preceding 5 days.

Physical skills, body and spatial awareness contribute to a child's personal and social development by enhancing confidence and self-esteem. Young children are active learners who enjoy learning through play and physical activities. During play children engage in learning experiences that require them to use a range of physical skills whether playing indoors or outdoors. Physical activities can be incorporated into every area of learning, from simple action rhymes and games in mathematical development to large movements in response to creative music.

QUESTION #04

Suggest activities for preschool children to enhance intellectual development?

Ans:

A young child's social life evolves in relatively predictable ways. The social network grows from an intimate relationship with parents or other guardians to include other family members, nonrelated adults and peers, social interaction extends from home to neighborhood and from nursery school to formal school.

Becoming familiar with the way children grow and develop and the basic characteristics of children of different ages permit a teacher to better understand and plan for their growth. In the following section social characteristics and hallmarks of children from preschool to elementary are summarized.

ACTIVITIES FOR PRESCHOOL CHILDREN TO ENHANCE INTELLECTUAL DEVELOPMENT:

Children who display perplexing behaviors have not yet learned to react appropriately in certain situations. It is our job as parents and teachers to be aware of the skills each child needs in order to get to the next level of social development. Children need to be taught to negotiate compromise and cooperate with each other. Conflict resolution is a great helper for teaching social skills to young children who are constantly experiencing social problems during play.

There are many preschool socialization activities that teachers can use in their classroom that develop and promote friendships in young children. Some ideas to use are listed below:

- **Games:**

Choose games that require children to work in pairs or small groups

- "Row, Row, Row Your Boat": Sit children facing each other with legs crossed and holding hands. Have them rock back and forth as they sing. Allow children to select a partner, or select children to work together to promote new friendships. Let the children that struggle with friendships to choose first.
- Promote positive physical interactions: Have the children draw with their finger on the back of a peer as they say this poem "Draw a snake upon your back, put two eyes and paint it black, which finger did I use last?" The other child then guesses which finger was correct. The "artist" should tap with

different fingers during the last sentence in additional plays to make the game more challenging.

Name Song:

Using this "Name Song" helps classmates learn everyone's names in a fun way. Use any tune you wish: "I know what my name is, I wonder if you know, My name is"(Point to a child who calls out their name), Then all sing, "hello, hello, hello, hello, hello, hello, hello, hello." Have the children wave to the child who has said their name.

Books:

Many children's books feature different friendships and relationships. Point these differences out to children as you read. Developing friendships can be a difficult task especially for a child with a silent and more reserved personality. Do not drive children if they are not ready. Help them to develop social skills needed to begin friendships and assist the friendships in developing over time. Teachers make wonderful role models and children learn from example. Make a point of speaking positively about all the children and share with them the positive qualities that they individually bring to friendships.

Tools for Promoting Social Learning:

The High Scope approach gives adults the tools they need to help children develop strong and positive relationships with adults and peers. Teachers learn how to create a positive climate in the classroom as a foundation for social learning. The social skills children develop in High Scope programs contribute to their readiness for school and their ability to meet a variety of challenges throughout their lives.

❖ Nurturing Social Environment:

Creating a warm and nurturing environment in preschool not only helps children form trusting relationships with others but also promotes learning in all areas. Surrounded by a positive and supportive classroom climate, children are likely to become engaged and motivated learners. Within this environment, activities and interactions are planned around the key developmental indicators (KDIs) in social Learning to Resolve Conflicts. Helping children manage frustrations and resolve social conflicts is an area of social learning that is often particularly important to teachers. Teachers find that High Scope's six-step conflict resolution process is especially useful.

❖ **Conflict Resolution Steps:**

- Approach calmly, stopping any hurtful actions. Place yourself between the children, on their level; use a calm voice and gentle touch; remain neutral rather than take sides.
- Acknowledge children's feelings. Say something simple such as “You look really upset;” let children know you need to hold any object in question.
- Gather information. Ask “What's the problem?” Do not ask “why” questions as young children focus on that what the problem is rather than understanding the reasons behind it.
- Restate the problem: “So the problem is...” Use and extend the children’s vocabulary, substituting neutral words for hurtful or judgmental ones (such as “stupid”) if needed.
- Ask for solutions and choose one together. Ask “What can we do to solve this problem?” Encourage children to think of a solution but offer options if the children are unable to at first.
- Be prepared to give follow-up support. Acknowledge children’s accomplishments, e.g., “You solved the problem!” Stay nearby in case anyone is not happy with the solution and the process needs repeating.
- Adults respect children’s ideas for solving problems, even if the options they offer don’t seem fair to adults. What’s important is that children agree on the solution and see themselves as competent problem-solvers.

QUESTION#05

Compare the theories of Lev Vygotsky and Albert Bandura and their implications for education?

Ans:

Lev Semyonovich Vygotsky (1896 - 1934):

Lev Semyonovich Vygotsky was born in Western Russia (Belorussia) in 1896. He is a well-known theorist in the areas of social development and education. He claimed that cognitive functions are linked to the external (or social) world. Adults and more competent peers guide a child into the social world. Vygotsky explained

that children learn in a systematic and logical way as a result of dialogue and interaction with a skilled helper within a zone of proximal development (ZPD). It has two boundaries. The lower boundary of the ZPD is activities the learner can do independently without the help of a teacher or guide. Similarly, the upper limit of the ZPD is those learning outcomes that the learner could not achieve at this time even with the assistance of a competent teacher or mentor.

Scaffolding is another concept for guiding learning presented by Vygotsky. Scaffolding is the process by which the teacher continuously changes the level of support given to the learner as the learning needs change. A teacher who is engaged in scaffolding has to be involved at every step of instruction. Teacher gradually decreases the support provided to the child while learning a skill. As he observes that the child can perform the skill independently, he stops assisting the child. Both of these concepts are important in describing how a child becomes socially competent.

Vygotsky's socio-cultural theory:

Lev Vygotsky's socio-cultural approach builds upon the role of language and cultural tools in shaping up human cognition and development. He believed that the cultural influences, such as, language, instruction, and social interactions etc have a profound influence on children's cognitive advancements. He introduced the concepts of the zone of proximal development (ZPD) and scaffolding to demonstrate how do children move from one to another level of cognitive progress. ZPD refers to certain cognitive abilities that are in the process of developing, and that can be achieved with support from an adult or a capable peer. Whereas, scaffolding allows to adjust level of support according to the learner's needs and performances. While Piaget focused on the individual learners with a strong emphasis on the stages through which they pass during cognitive development, Vygotsky argued that social interactions, cultural tools and collaborative processes set the stage for higher level cognitive processes.

Albert Bandura (1925):

Albert Bandura was born on December 4, 1925 in the province of Alberta, Canada. He has done a great deal of work on social learning and is famous for his "Social Learning Theory" (renamed as "Social Cognitive Theory"). According to Bandura, development of social competence depends on three kinds of factors: (1) Behavior's children and adults observe within their home or society (2) mental factors such as a student's own expectations of success, and (3) social factors such as classroom and

school climate. Bandura's reciprocal determinism model indicated that these three factors are mutually related. Each factor affects others equally and changes in one factor will result in changes in the others. In the classroom, for example, a child's beliefs about himself and his competence (self-efficacy) can affect social behavior which, in turn, will have an impact on the classroom environment. At the same time, changes in the classroom that lead to a change in competence will have an impact on self-efficacy.

Bandura believes observation, imitation, and modelling are central components of the learning process, and that behaviorism alone can't account for every kind of learning.

Thus his theory is a blend of:

- Behavioral theory – which posits behaviors are the result of conditioning, and
- Cognitive theory – which gives weight to psychological features like attention and memory.

Bandura added a social element to the behaviorists concepts of conditioning, reinforcement, and punishment, pointing out that watching other people is a common way to learn new information and behaviors. For instance, just watching others play cricket (even on TV) will give you a good idea of what a cricket bat actually does.

