

# **Module 5      Educational Theory and Practise**

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## **Unit 5.4              Human Growth and Development**

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Revised September 2000

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# Introduction

## About this Unit

Welcome to the fourth in the series of units on Educational Theory and Practise – Human Growth and Development.

This unit consists of four (4) sections: **Section One** discusses the stages of human development. **Section Two** discusses the influence of development for the teaching/learning process. **Section Three** discusses individual differences that influence learning and **Section Four** discusses alternative teaching strategies that accommodate individual differences.

## How to use this manual

In addition to the information on Human Growth and Development, this unit provides exercises as well as three assignments to help you achieve your goal of successful completion.

The exercises will not be considered as part of your final assessment. Their purpose is to help you evaluate your progress as you go through the unit.

Answers to these exercises are provided at the back of each section, so that you can check your work.

Assignments are provided at the end of the unit. There are three assignments in all. Each assignment must be completed and submitted to your tutor.

Please Note: Results from the assignments will form the basis for evaluating your satisfactory completion of this unit.

## How you will be assessed

The assignments will require research; results should be presented in the form of written reports and samples of aids prepared by you. Contact your tutor regarding the time allowed for completing and submitting assignments. The three assignments will be graded as either 'passes' or 'incomplete'.

## Finding your way

Throughout the unit you will see symbols (or ‘icons’) in the left-hand margin of some pages. These symbols will help to guide you through the text.



Read



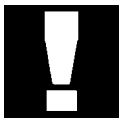
Important—take note!



Assessment task



Self-checking questions or exercises



## Competency

The competency for each unit is expressed as a number of learning outcomes and assessment criteria.

Assessment criteria specify what you must be able to do to show you have gained the knowledge and skills needed to achieve each learning outcome.

Each unit has its own assessment criteria specified. Recognition of prior learning is encouraged. If you feel confident that you have the necessary level of competence to successfully complete the elements shown below, you may be able to take the assessment without studying the unit.

## Learning Outcomes

Upon completion of this unit you will be able to:

- Identify stages of human growth and development.
- Define terms relevant to basic developmental psychology.
- Explain implications of the characteristics of development on the teaching/learning process.
- Explain six (6) areas of individual differences that influence learning.
- List factors that contribute to individual differences.
- Select teaching strategies that accommodate individual differences.

## Other Resources

You may need to explore other learning resources in addition to the information provided in this unit. Important sources of information include:

- Local libraries and resource centres
- Individual, the workplace and other training institutions
- Community and professional organisations

There may be other support activities provided by the college at which you enrolled, such as:

- Audio-conferences by phone
- Group discussion sessions
- Seminars
- Workshops

Your tutor will advise you of arrangements for these activities if they apply to this unit.





# Section 1



## Stages of human development

Developmental psychology is the study of how people change throughout the span of their lives. It involves understanding when certain skills appear, how these skills change with age, and whether the change occurs suddenly or gradually. Developmental psychology also looks at how development in one area, such as physical growth, relates to changes in other areas such as language, cognition and personality.

As an educator, it is important for you to know and understand how people develop through the life span. If you have a basic understanding of how individuals develop over time, that knowledge will help you to better analyse students in order to choose teaching strategies to meet their educational needs more effectively.

With this in mind let's begin our study of Human Growth and Development.

### What is development?

Growth refers to the physical changes that occur in individuals as they age. Maturation refers to the biological changes related to heredity.

Development is the life-long process of change and stability intermingling as the forces of nature and nurture work to produce a unique individual.

### Studying Development

In the study of human development three important questions are:

1. Is nature or nurture responsible for human development?
2. Does development take place continuously or in stages?
3. Are we designed to remain the same throughout life (stability) or are we to be constantly changing (change).

1. Nature or nurture: People who support the nature side of this debate would say that human behaviour and developments are governed by automatic, genetically predetermined signals known as maturation. Just as a flower unfolds in accord with its genetic blueprint, we humans generally crawl before we walk and walk before we run. While severe environmental influences such as physical deprivation to the point of malnutrition or total isolation can retard development, naturists believe that growth tendencies are inborn.

On the other side of the debate, those who support the nurture perspective argue that development occurs primarily through learning and interactions with the environment. The idea that with special training any child can become a Mozart is an example of an extreme nurturist position.

Which position is more correct? Today most psychologists support an interactionist model, which sees both inborn, genetic processes and environmental factors contributing to human development (Plomin, 1989; Vasta, Haith, and Miller, 1992).<sup>1</sup>

Therefore both nurture and nature are responsible for a person's growth and development.

2. Continuity or stages: The continuity proponents say development is continuous, with new abilities, skills and knowledge gradually added at a relatively uniform pace. The continuity model, then, suggests adult thinking and intelligence differ quantitatively from those of a child. We simply have more math skills or verbal skills, for example. Stage theorists, on the other hand, believe development occurs at different rates, alternating between periods of little change and periods of abrupt, rapid change. We will discuss Jean Piaget's<sup>2</sup> stage theory of cognitive development that describes a child's thinking as qualitatively different from that of an adult. In Piaget's model, cognitive development remains relatively stable while the child is in a given stage, but movement to the next stage brings an abrupt shift in the child's abilities.

Like the nature versus nurture issue, the continuity versus stage question is not a matter of "either-or." Physical development and motor skills, for example, are believed to be primarily continuous in nature, while cognitive skills are usually described as the result of discrete stages that build on skills learned at each stage.

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<sup>1</sup> See bibliography for reference, page 85

<sup>2</sup> See bibliography for reference, page 85

3. Stability or change: Have you generally maintained your personal characteristics as you matured from infant to adult (stability)? Or does your current personality bear little resemblance to that which you displayed during infancy (change)? Psychologists who emphasise stability in development hold that measurements of personality taken during childhood are important predictors of adult personality. Once again research shows the answer is somewhere in the middle. Some traits are stable while others vary greatly across the life span.

As we refer to stages of development, we recognise that heredity – the effect of genetically transmitted traits, and environment – the external stimuli that allow the growth process to occur, along with certain other constants, weave together to form the unique person.

For example, to understand the adolescent student you must consider the physical changes that mark the transition from the body of a child to that of an adult. Also, the intellectual development that leads to thinking about moral issues and future goals, and the changing relationships with friends and family that set the stage for adulthood.

Similarly, to understand middle-aged students, it is important to know about the relevance of health habits, intellectual interests, and social activities. A student's physical condition can affect his/her learning ability just as emotional state can affect cognitive functioning.

To help you understand how people progress through the life span let's discuss the various stages of development.

### **What is a stage?**

A stage is a distinguishable period of growth and development; a period during which significant change occurs. The movement from stage to stage is logical but not automatic. Previous stages form the base that enables successful operation at the next level.

The stages of human development are:

|                 |                     |
|-----------------|---------------------|
| Infant          | (birth to 1 year)   |
| Toddler         | (1 to 2 years)      |
| Preschool       | (2 to 6 years)      |
| Child           | (6 to 12 years)     |
| Adolescent      | (12 to 20 years)    |
| Young Adult     | (20 to 40 years)    |
| Middle Adult    | (40 to 60 years)    |
| Young-old Adult | (60 to 80 years)    |
| Old-old Adult   | (80 years and over) |

### **Domains of Development**

Within the primary stages of development there are three major domains.

- The Physical Domain – body changes and motor skills development.
- The Cognitive Domain – intellect, thought process and language.
- The Psychosocial Domain – emotions, personality and relationships.

Discussing development from the perspective of the three domains makes it easier to comprehend. Please bear in mind that development is holistic and each stage is inter-related with all three domains.

Now check your progress by completing the exercise that is found after the summary!



### **Summary**

- Development is the life-long process of change and stability intermingling as the forces of nature and nurture work to produce a unique individual.
- Nature and nurture, continuity and stages: and stability and change interact to produce a unique human being.
- A stage is a distinguishable period of growth and development. Each preceding stage forms part of the foundation of the next stage of development.

- The primary stages of human development are:
  - Infant
  - Toddler
  - Preschool Child
  - Child
  - Adolescent
  - Young Adult
  - Middle Adult
  - Young-old Adult
  - Old-old Adult
- Three domains of human development are:
  - Physical
  - Cognitive
  - Psychosocial



### **Activity 1**

#### **Check your progress**

1. List six major stages of development.
2. Define the words development and maturation.
3. Explain how both nature and nurture are relevant to development.
4. State two benefits to be gained by an educator learning about human development.
5. State the three primary domains of human development.

***Check your answers at the end of the section. (Page 29)***



## Physical development

Physical development refers to the changes in body and motor skill development.

### **Infancy:**

#### ***Brain Development***

The visual signs of an infant's development, (smiles, holding a rattle, etc.), are facilitated by the functioning of the brain and other sections of the developing nervous system. The development of the central nervous system will support the change from involuntary and sensory behaviours to more voluntary actions.

The basic unit in the brain and the rest of the nervous system is the **neuron**. It receives and transmits information. A neuron consists of a **cell body**, which contains the substances that keep the cell alive. At the receiving end of the neuron are **dendrites** that allow one neuron to receive information from thousands of other neurons. The **axon** is the cylindrical section of the neuron, which transmits information to other neurons. **Terminal buttons** are small knobs at the end of the axon that release chemicals called neurotransmitters. **Neurotransmitters** are the messengers that carry information to nearby neurons.

The brain stem and spinal cord are the most developed part of the brain at birth, because they are involved in critical psychological functions and behavioural responses. Most of the upper portion of the brain, (**cortex**), is undeveloped. The sensory and motor areas work at a primitive level.

Impulses cannot be efficiently conducted because the insulating cover, (**myelin sheath**), of the neurons that carry information from the cortex to the motor nerves, is missing. This makes the infant slower in processing information. Myelination occurs faster in the sensory tract than the motor tract to ensure the infant explores the environment safely.

The cortex develops between three and six months. This allows more voluntary behaviours to replace the programmed behaviours.

The brain is divided into two hemispheres, left and right. The right hemisphere controls the left side of the body, and the left hemisphere controls the right side of the body. Language is controlled by the left hemisphere for most individuals and emotions such as happiness and sadness are controlled by the right side of the brain. Your ability to make and carry out plans is controlled by the frontal cortex.

Experience helps the brain to develop. In many sensory areas dendrites are overproduced. Which dendrites remain depends on the use of the sensory organs of the individual. New dendrites are also formed in response to new situations in the environment. Brain growth and experience are reciprocal. Brain growth determines the child's abilities and experience affects the growth and development of the brain.

### ***Growth:***

Most infants double their birth weight by four months and triple it by one year. In the first year, length increases by about 50%.

Growth and development follow the cephalocaudal and proximodistal principles.

**Cephalocaudal:** means that growth and development follow a head-to-tail pattern. At birth the head and brain are better developed than are the hands and feet. The infant is also able to control his hands before his feet.

**Proximodistal:** principle means that development occurs from inside to out. So the internal organs develop before the extremities. Also the infant controls his arms, followed by his hands and then his fingers.

The pattern of muscular development is from control of mass to specific muscles. The infant gains control over the larger muscles responsible for major movements. He then slowly gains control over the fine muscles. Development has a predictable sequence. Children will crawl, then creep and then walk. But we cannot predict exactly when it will occur. Maturation alone will not ensure the development of motor skills. Practise and stimulation helps the child to develop his motor skills.

### **Toddler:**

Toddlers are more active than infants because they are able to walk. They move speedily from one activity to the next. Safety is a concern for individuals who interact with toddlers as they are accident-prone.

Toddlers use their whole bodies when learning. They learn mostly by doing, or by active manipulation. By age three they develop simple eye-hand coordination skills. They move from random exploratory activities to more controlled activities with a definite end in view.

**Preschool:**

During the preschool years the rate of growth slows. The child grows about 2.5-3 inches per year. Boys are a little taller and heavier than girls at this stage. The head is about 1/6th the body size. Boys have more muscle tissue and girls more body fat.

***Motor Development:***

Children have become more proficient in walking and are now just as likely to run as to walk. They are more coordinated in their movements. Large muscles are better developed than fine muscles. Children can run, jump, hop, skip and climb by the end of this stage.

Preschoolers can hold an object with their fingers, e.g. drawing with crayons.

***Brain Development:***

Myelinization allows the neuron to transmit information faster. The child can therefore process information at a faster more efficient speed. The myelinization of the brain areas involved in complex cognitive functioning is slower than those of the sensory structures, which are completed.

The insulation of the neuron ensures there is less leakage of electrical impulses, therefore only the correct neurons are activated. The child's ability to attend to a stimulus is increased, as there is less interference.

**Childhood:*****Growth:***

Rate of growth decreases. Boys are a little taller than girls at the beginning of the period, but by the end of the period the girls are a little taller. This is because their adolescence growth spurt begins about two years before the boys. Boys and girls weigh approximately the same at age eight, but the girls become heavier at age nine or ten and stay heavier until they are about 14.5 years.



***Motor Skill:***

They can run, climb, hop and gallop. They are just mastering skipping, throwing, catching, kicking and balance. Running speed increases and they can jump longer distances. They become more accurate in throwing and can throw for longer distances.

Boys are better in running and throwing; while girls do better in things that require agility, rhythm and hopping. Boys are also stronger than girls, but girls show more muscular flexibility.

***Adolescence:***

Some persons use the term puberty and adolescence interchangeably. However, **puberty** refers to the biological changes leading to sexual maturation, while **adolescence** is the psychological experience of the child from puberty to adulthood.

During puberty, changes that directly affect the reproductive organs are referred to as **primary sex characteristics**, e.g., maturation of the penis, scrotum and testes in males; and maturation of the ovaries, uterus and vagina in females. **Secondary sex characteristics** are responsible for differentiating between male and female, e.g., broadening of the hips and breast development in females; broadening of the shoulders, beard growth and deepening of the voice in males; and growth of underarm and pubic hair in both sexes.

***Females:***

Puberty begins with the growth spurt and budding of breasts in girls at about age ten or eleven years. This growth spurt occurs two years earlier in girls than boys. As a result 11-12 year old girls are usually taller and heavier than boys of the same age. The girls' hips then broaden and the genital organs and breasts mature.

Menarche, the first menstruation, occurs when the growth spurt has slowed considerably. This period is mildly stressful for most girls.

***Males:***

Growth of the testes, scrotum and pubic hair are the first sign of puberty in males. A spurt in height and growth of the penis take place a year later. The male growth spurt, which occurs about two years after the females', results in the male being taller than the female. The shoulders widen, the voice deepens and facial hair appears. The secretion of testosterone is partly responsible for the development of muscles in the male.

**Young Adult:**

Most individuals are at the best physical shape of their lives at the young adult stage. Both males and females reach their maximum heights before or at the young adult stage.

The greatest weight gain in adulthood takes place between 25-35 years. The amount of muscle tissue decreases and bone tissue becomes less dense.

Sensory acuity peaks in the early twenties. Visual acuity remains high until middle age. There is a small decline in the ability to see details after age 25-30 years. The eyes also take a longer time to adjust to the dark. In the late twenties hearing begins to slowly decline, especially for high pitched tones. A person's ability to understand speech may be affected by this hearing loss.

**Middle-Adult:**

Physical changes become visible, e.g. greying hair, wrinkles and weight gain. There is a decline in muscle tone, strength and stamina around age 40. Physical fitness, coordination, and flexibility decline for most people.

**Menopause**, (the cessation of a woman's menstrual cycle), occurs during middle adult, between 42 and 52 years. **Climacteric**, (the physical changes that lead from fertility to infertility), also occurs during middle-adult.

Fifty-percent of individuals experience a decline in visual acuity after the age of 45.

Now check your progress by completing the activity that is found after the summary.



## Summary

- Physical development includes body changes and motor skill development.
- Infancy is characterised by very rapid growth in size, shape and skill development.
- During childhood physical growth continues while many skills e.g. climbing, dancing are mastered.
- Adolescence is the most active period of physical development, marked by the growth spurt and puberty.
- The individual in early adulthood is at the prime of life: all systems operate at peak levels. Both sexes are stronger, taller and healthier during this period.



### Activity 2 Check your progress

1. List two major physical changes and the stage in which they occur in the life cycle.
2. State the main physical achievements of the adult stage of development.
3. Compare the major physical changes of the preschooler and the school-aged child.
4. Explain the effect of experience on brain growth.
5. Differentiate between cephalocaudal and proximodistal principles of growth & development.

***Check your answers at the end of the section on page 30.***



## Cognitive development

There is a lot that could be said about the development of the cognitive domain. In this domain, development of intellect, thought process and language occurs. Brain maturation is required for the development of motor, sensory and perceptual ability. The infant's experiences and new abilities promote the development of brain capacities. For our purposes we will focus on the contributions of a Swiss psychologist Jean Piaget, who developed a stage theory to explore this area of development.

### Sensorimotor Stage:

**0 – 2 yrs.** During this stage babies think solely with their senses and motor skills. They both learn about the world and express what they learn primarily through touch: using hands, mouth, ears and eyes. Piaget divided the sensorimotor stage into 6 sub stages to reflect the tremendous amount of cognitive development that occurs during this stage.

#### ***Sub-stage 1: Reflexes*** (0-1 month)

Infants' actions are based on innate reflexes such as sucking, eye movement, reaction to sound and vocalisation. Environmental stimuli elicit the behaviour e.g. a bottle of feed will stimulate the sucking reflex.

#### ***Sub-stage 2: Primary Circular Reactions*** (1-4 months)

The infant discovers by chance that he can control certain actions, which are satisfying and repeats them. These actions are based on the infant's body and are therefore called primary. They are circular because they are repeated. Example is sucking the thumb.

#### ***Sub-stage 3: Secondary Circular Reactions*** (4-8 months)

At this stage, the infant discovers that he can do interesting things with objects outside his body. He discovers the response by accident and keeps repeating the action to bring pleasure. These actions are considered secondary as the objects are outside the body. Examples are shaking a rattle, squeezing a rubber duck or hitting a mobile.

***Sub-stage 4: Co-ordination of Secondary Reactions***  
(8-12 months)

During this stage the infant combines two or more activities to achieve a goal. He is able to separate means and ends. For example if you cover a rattle with your hands he will push away your hand (means) to grasp the rattle (end). This signifies the start of intentional behaviour.

***Sub-stage 5: Tertiary Circular Reactions***  
(12-18 months)

Toddlers use objects in new ways to solve problems or to produce interesting results. They carry out little experiments e.g. hitting the rattle or throwing it, to see if it will make a different sound from when it is shaken, or dropping different objects from different distances to detect the different sounds that will be made. Their natural curiosity leads them to explore, to find out the way things work.

***Sub-stage 6: Mental Representations*** (18-24 months)

By this stage the toddlers are using words and gestures. These show that the toddlers can use symbols. Being able to use symbols signifies the toddlers' ability to solve problems mentally and illustrates deferred imitation, (to imitate an act previously observed), and pretend play (use an object to represent something else).

An example of a problem solving activity is using a ruler or a stick to pull out of reach objects towards them, after thinking about it.

**Preoperational Stage:**

**2 – 4 yrs.** Piaget saw pre-schoolers as being incapable of operations (mental representations of actions that obey logical rules). He divided the preoperational stage into 2 sub-stages: Pre-conceptual period & Intuitive period.

***Sub-stage 1: Pre-conceptual Period*** (2-4 years)

The symbolic function, (the ability to make one thing stand for or represent another thing), appears during this sub-stage. This is characterised by Pre-schoolers showing the

following limitations in conceptual reasoning during the pre-conceptual period:

1. **animism:** (to attribute life and life like features to inanimate objects) e.g. the clouds are sad and are crying.
2. **transductive reasoning:** reasoning from the particular to the particular. When two events occur together the child believes one has caused the other; e.g. lights are turned on at night; therefore if the lights are on, it must be night.
3. **egocentrism:** believing that others view the world the same way they do. This makes it difficult for pre-schoolers to distinguish appearance from reality. When they insist on their way they are not being contrary. They do not understand that other people differ in their ideas, conviction and emotions.

A preschooler at age two generally has approximately 200 words or more in his vocabulary. This knowledge of certain symbols facilitates imaginative make-believe play.

Although children are able to relate to symbols they are not yet able to consistently relate them in a logical fashion to each other. They can link symbols but cannot apply rules regularly e.g. they may understand that  $3 + 2 = 5$  but not realise that  $5 - 2 = 3$ .

Piaget also suggests that children during this stage have a tendency to be able to only think about one idea at time - one-track minds.

As cognitive abilities increase, a language explosion occurs as vocabulary, grammar and the practical use of language show rapid improvement.

### ***Sub-stage 2: The Intuitive Period (4-7 years)***

Children are less egocentric and are better at classifying objects based on shared perceptual attributes e.g. size, shape and colour. Their thinking is intuitive because their understanding of objects and events is still based on the way things seem to be instead of on logical or rational thought processes.

Examples of children's intuitive reasoning are borne out in the following:

1. **class inclusion** - children are not able to organise objects into classes and sub-classes based on similarities and differences between the groups. When shown 12 flowers, 8 red and 4 white, then asked whether there are more flowers or red flowers, children will say there are more red flowers.
2. **failure to conserve** - Pre-schoolers do not recognise that quantities remain the same in spite of changes in their appearance. E.g. If you have two identical glasses of water the child will recognise that they are the same. But if you pour the water from one glass into a taller one, the child will tell you that the taller glass has more water. Piaget felt that pre-school children failed to conserve because they lacked decentration.

Decentration is the ability to concentrate on more than one aspect of a problem at the same time. Reversibility is the ability to mentally undo or negate an action.

### Concrete Operational:

**7-11 yrs** At this stage children are able to reason and understand logical principles as long as they are applied to concrete or specific cases. They become less egocentric. They realize that other people view the world differently and are able to imagine how others would feel in different situations.

The school age child is able to accomplish the tasks that the preoperational child was unable to do. They are able to decentre, conserve, reverse actions, seriate and classify.

Children solved some conservation problems before others e.g., number before substance. Piaget used the term *horizontal decalage* to describe the situation where the child acquired the underlying principle for solving a problem but is unable to apply it to other similar contexts.

Children during this stage begin to really enjoy words. This is seen in the poems they write and the jokes they tell. They understand more about the many ways that language can be used. Their increased knowledge of vocabulary, grammar and pragmatics enhances their understanding of self and of the world around them.

**Formal Operational Stage:**

**11yrs +** The adolescent demonstrates the following cognitive skills:

1. **combinational logic:** the ability to find all the possible alternatives to solve a problem. Some may be real while others may be impractical.
2. **propositional thought:** the ability to evaluate the logic of verbal statements (propositions) without referring to real world situations, e.g., what if dogs could talk?
3. **using abstractions:** dealing with material that is not observable. They can interpret proverbs and can talk in terms of ideals and values.
4. **hypothetico-deductive reasoning:** forming hypotheses and using scientific logic. When faced with a problem, an adolescent will find all the possible factors that may affect the out come and form specific hypotheses that may solve the problem. They then test them to see which ones may work in the real world.

**Post Formal:**

**20 yrs +** Piaget's theory stops at the formal operations stage even though there is continued cognitive development throughout adulthood.

As a result, we shall discuss adult cognitive development using a dynamic cognitive style referred to as Post-formal Thought.

At this level one can adapt to life's inconsistencies and combine contradictory elements of a thought or a situation into a more comprehensive unit. Post-formal thought is divided into three components:

- a) **Absolute Thought:** Young adults in their early twenties think in an absolutist manner. They believe that there is only one right way of solving a problem and that personal experience is the root of all truth.



- b) **Adaptive Logic/Relativistic Thinking:** Involves the interaction between abstract, objective thought and the processing of expressive, subjective thoughts (sensitivity).

This type of thought incorporates logic and facts without dismissing the importance of subjective feelings and personal experience.

Adults in their late twenties to early middle age use relativistic thinking, suggesting that there are many sides to an issue, but, the right action or solution depends on the context of the problem.

- (c) **Dialectical Thought:** Is considered the most advanced form of cognition. Dialectic thinking involves considering different viewpoints of an idea. They synthesise them into a workable solution. This type of thought requires continual assessment and review; therefore, it allows for constant processing and requires maintaining an open view of the world. Because change is inevitable in the modern world, dialectical thinking is necessary to be a successful achieving adult.



## Summary

- Cognitive development refers to the development of intellect, thought processes and language.
- Cognitive development occurs in every stage of life.
- Jean Piaget's theory addresses cognitive development in four stages:
  - Sensorimotor Intelligence / Infant/ Toddler
  - Preoperational Thoughts / Preschooler
  - Concrete Operational Thought / Child
  - Formal Operational Thought / Adolescent
- Post-formal Thought addresses cognitive development throughout adulthood.
- Cognitive development progresses from thinking solely by the use of the senses and motor skills in an infant to adaptive and dialectical thought in the adult.



### Activity 3 Check your progress

1. State the elements involved in cognitive development.
2. Name and briefly describe two of Piaget's four stages of cognitive development.
3. State the key differences between formal operational thought and post-formal thought. Give an example of each from your own experience.

***Compare your answers with those found at the end of the section on page 31.***



## Psychosocial development

The psychosocial domain focuses on the development of emotional expression, self-awareness and temperament. It also deals with relational issues such as relationship with parents and the impact of culture on development throughout the life span.

One of the primary contributors to this area of study is Erik Erikson<sup>3</sup> who developed the psychosocial theory of human development. Erikson's theory is briefly outlined as follows:

### Trust vs. Mistrust (0-1 yr)



The major tasks of this stage relate to age appropriate competences such as overcoming helplessness and dependence moving towards independence and self-reliance; from total attachment to others to initiating action.

<sup>3</sup> See bibliography for reference, page 85

The development of trust for other people, especially the mother, is expected within six months to a year. The child must demonstrate self-coping skills. Trust results in a child's **hope** that wishes will be attained. Those who are frequently disappointed have difficulty developing close relationships.

The culture of the child will be determinative, and its temperament will be fashioned in association with others.

The start of infancy self-awareness is absent. By progression, infants come to see others as important and begin forming ideas about parents, siblings and self, which are increasingly complex.

There is also correspondence between the role of the mother and that of the child as each benefit from the role performance of the other; the mother gets pleasure and the child gets nurtured. Security in such a relationship produces or enhances the child's independence.

### **Autonomy vs. Shame/Doubt (1-3 yrs)**

Learning from parents, siblings and others. There are several tasks to be completed at this level. These include:

- controlling own actions
- seeking independence from others
- exploring self-strengths

Failure in these tasks is likely to produce feelings of shame, especially when comparisons are made with other children of the same age. Such a child needs reassurance to overcome the resulting doubt about his abilities. With success comes strength and self-approval.

Balanced development combines the strengths of achievement with weaknesses of failure to prompt the will or desire to succeed. Doubt allows them to know what they can and cannot yet do.

Shame and doubt help toddlers regulate themselves. Too much freedom is unhealthy. Adults are needed to help toddlers set limits. Here toilet training becomes very important, and the use of language allows children to make themselves understood thus reducing the frustration levels.

**Initiative vs. Guilt (3-5 yrs)**

Purposeful play characterises this stage, with the child exploring the environment. There is much curiosity. Additionally there is identification with parents and other adults. An effort is made to try out new things in a timely manner. Where guilt is allowed to overwhelm the child, self-righteousness and intolerance are the results in adult life. Properly resolved, the conflicts of childhood produce both spontaneity and responsibility.

There is much cooperation alongside initiative. Conflicts resulting from differing demands of people in the child's role set require moderation of personal wishes by group interests. Social goals make equal demands on the child's time. A sense of responsibility develops here, if tasks are successfully completed. Conscience develops with the help of moderate rebukes. Rare occasions of praise inhibit the development of self-confidence.

***Relationships and Interactions***

Mothers feed, change and nurture, while fathers spend more time playing with children, so much so that the infant may even become more attached to the father than the mother. Children must display both affiliation, (smiling, looking at and laughing) and attachment behaviours (closeness, clinging to and wanting to be picked).

More significant attachments lead to higher rates of growth in the child. Attachment starvation results in growth failure or failure to thrive. The most secure infants are those attached to the mother figure as a base, while exploring other figures. Except for those who are most psychologically challenged, most children have attachments with one or more persons. Secure attachments in infancy results in secure personalities in later life.

***Play as a Feature of Development***

A key ingredient of development at this stage is play where the child begins to test the Role Maps acquired from others. It is also a time to test the various ideas about how to interact with others. Through imaginative play, mental development is enhanced. Play is essentially childhood; it is magic and joy. From the games played and the adulation of friends, children learn rules, cooperation and heightened self-esteem.

**Industry vs. Inferiority (5-12 yrs)**

Here there is a need for interaction and acceptance by peers. The discoveries that self is significant and that skills and abilities allow for accomplishment are useful. Teachers and schools are helpful in leading to the resolution of the conflicts associated with this stage of development. Industrious action, a feeling of accomplishment and the winning of praise help to mould the personality. Repeated failure elicits a poverty of praise with the result that an inferiority complex develops. The need to experience success for oneself is great.

The learning of basic skills is key. Self worth develops from a sense of achievement. Masculine and feminine roles are selected and emulated.

***Interaction***

The child must have meaningful relationships with peers. Honest, morally accepted interaction produces a sense of morality, and the conscience begins to bud.

**Identity vs. Identity Confusion (12- 18 yrs)**

Here the adolescent in turmoil is challenged to find self and to answer the question “WHO AM I?” There is a search for a significant place and a role for self. Goals are self-chosen as the adolescent becomes more inner-directed, rather than other-directed. Success in this venture produces lasting identity and high self-esteem.

Problem-solving skills become paramount, as is the achievement of significant and meaningful sexual relations with the opposite sex.

In answering the question “WHO AM I?” homosexual adolescents might not see themselves as having counter-cultural identities. This is the negative outcome of uncertainty about identity roles.

***Relations and Self-Awareness***

The peer group is very important, new concepts of personality are explored, selected or rejected. Emotional independence of significant others is critical as this gives freedom to experiment and decide on what is worthy of acceptance.

As development is not unitary, there is some delay in development. Intimacy with the opposite sex is usually desired at this stage, yet not achieved by all.

Careers, marriage, habits, friends, and appearance as it relates to the self are major issues of this stage. Success in these tasks produces an identity; failure produces confusion.

### **Intimacy vs. Isolation (18-25 yrs)**

Crises here relate to how to be intimate and or how to cope with the failure to achieve intimacy and the resulting isolation. Identity should now be fixed, and the goal is to transfer a part of this identity to another in a sexually fulfilling, intimate relationship

Failure to have intimacy usually results in a desire to be alone, in isolation; a most undesirable condition. If these crises are resolved, the person is able to give and receive love.

Courtship, mate selection, cohabiting with or without the blessing of the Church, starting a family, rearing children, taking responsibility for a home, being civic minded, making social networks- all are significant elements of this aspect of development. Earlier disappointments often block the desire for intimacy, as the individual is not sufficiently integrated to cope with disappointments.

### **Generativity vs. Stagnation (25-65 yrs)**

Is the person creative, reproductive, interactive or stuck in the mud? How mature is the individual in conventional terms? Usually persons in this category are parents of the next generation i.e. having children, are highly motivated to meet social goals of having a job, raising children, enjoying a relationship with a mate.

Additionally, those who break their relationship for one reason or another are usually capable of re-forming a bond of intimacy with another. The nurturing ability relates to people, animals and plants.

Responses from others are needed to relieve boredom, whether in one-night-stands or short-term pseudo-intimate relationships, or even apathy towards the opposite sex. Socially involved, caring people have no time to stagnate. The focus is on healthy personal styles in this stage.

Middle Adulthood is another name for this stage. The pursuits are of leisure, career and adjusting to the changes that come with age, their possibilities and limitations in a healthy socially effective manner are signs of a mature middle adulthood filled with the achievements of appropriate psychosocial development. The possibility of children leaving home and the loneliness of the “empty nest syndrome” are taken in stride.

The next generation is a focus. Those who fail experience the emptiness of non-achievement, according to some psychological theorists.

### **Integrity vs. Despair (65 yrs +)**

This is the stage where the individual is judged by the ability to show a unitary personality with **balance, variety, unity and harmony** with those around, such that there is a meaningful fit into the available social mix. There should be easy-going attitudes, fewer quarrels, graceful ageing, with a meaningful mix of religious, social, economic and personal activities.

Non-achievement of the level of integrity required leads to despair and despondence. Self-contempt replaces self-acceptance.

The prospect of retirement for the integrated does not fill them with dread, for they have made friends and have people around them. Loss of a spouse evokes sadness but not despondence, unless the person is very old, for such an individual has coping skills especially if surrounded by a sympathetic social environment. Affiliations are useful and companionable.

Newly emergent grandparent types assume social roles as mother to the village/community, winning further approbation. Life is worth living for such persons. Integrity reduces the fear of death.

In summary we have now explored human development throughout all the stages of development in each of the four domains. The next challenge we must undertake is discovering how this knowledge can be effectively applied to education.

Now check your progress by completing the exercise that is found after the summary!



## Summary

- The psychosocial domain includes emotional expression, self-awareness, temperament and the impact of relationships on the development of the individual.
- Personality development progresses from total dependence to the study of cause and effect and discovery of self-identity.
- Self-awareness progresses from no individual self-concept to peer group reinforcement, personality exploration and increased focus on goal achievement.
- All aspects of psychosocial development are inter-related and holistic in actual operation, therefore, each affects the other as part of the social ecosystem of the individual.



### Activity 4 Check your progress

1. Describe the psychosocial domain
2. What are the three major psychosocial development achievements during childhood?
3. State three of the key psychosocial differences between adolescence and adulthood.

***Check your answers at the end of the section on page 32.***





### Answers to Activity 1

- (1) Any six of the following major stages of development.
- Infant
  - Preschooler
  - Adolescent
  - Middle Adult
  - Old-old Adult
  - Toddler
  - School Child
  - Young Adult
  - Young-old Adult
- (2) Definitions:
- a. Development is the life-long process of change and stability; and nature and nurture intermingling with each other to produce the unique individual.
  - b. Maturation is automatic genetically predetermined growth that occurs as humans develop.
- (3) Nature predetermines certain physical cognitive and personality characteristics of each person. We can tell the sequence of human development
- Nurture helps individuals to develop through learning and interactions with the environment.
- Both play a relevant part.
- (4) Two benefits to educators studying human development.
- a. Increased ability to analyse students
  - b. Greater accuracy in choosing teaching strategies to meet students needs. This then increases students' success ratings.
- (5) The three domains of human development:
- Physical
  - Cognitive
  - Psychosocial



## Answers to Activity 2

- (1) Two Primary physical changes:  

|               |   |
|---------------|---|
| Infant:       | rapid growth in size, shape and skill                         |
| Adolescent :  | growth spurt, noticeable change in shape and sexual potential |
| Middle-adult: | Climacteric, menopause  |
- (2) Adult stage physical development:
  - starts with peak physical performance. The body is taller, stronger, and healthier.
  - life style determines sustainability of peak levels.
- (3) For both preschoolers and school-aged children the following are true: Rate of growth decreases, girls are a little taller and heavier than boys, boys have more muscle tissues and girls have more body fat.
- (4) Experience determines which dendrites will remain after the overproduction at the infant stage. New dendrites are formed in response to new situations.
- (5) Cephalocaudal - Development takes place from head to foot.  
  
Proximodistal - Development takes place from the centre outwards e.g. hands to wrist to fingers.



### Answers to Activity 3

- (1) Elements of cognitive development:
  - intellect
  - thought processing
  - language development
- (2) Any two of the following stages of Piaget's four stages of development:
  - Sensorimotor: Infants learn through their senses and motor skills.
  - Preoperational thought: Preschoolers use mental symbols to represent objects and situations.
  - Concrete operational thought involves reasoning and logical understanding but only when applied to tangible cases.
  - Formal operational thought involves the development of scientific thought that is limited by egocentric tendencies. This stage results in the development of hypothetical deductive reasoning.
- (3) The key differences between formal operations and post-formal thought are:
  - Formal operational thinking is not very adaptive nor does it factor in feelings and experiences.
  - Post-formal thought allows for the interaction of objective and subjective elements and it encourages continual thought, evaluation and growth.



### Answers to Activity 4

- (1) The psychosocial domain focuses on the development of emotional expression, self-awareness, temperament and relationship development.
- (2) The three major psychosocial achievements of childhood
  - Uninhibited and free to learn, are susceptible to others' opinions of them
  - Increased focus on the group
  - Is more in touch with environment and can relate to economic and political changes
- (3) The three key psychosocial differences between the adolescent and the adult are:

Adolescence: - identity discovery

- significance of peer pressure
- controversy with parents

Adulthood: - clearer sense of identity as personality is set

- achievement focused
- desires open cordial communication with parents.

## Section 2



### Implications of development for the teaching/learning process

Development is an ongoing life-long process of change that affects every area of life.

This segment of the unit will examine how key characteristics of human development affect the teaching/learning process.

#### Key definitions

Teaching is the act of imparting knowledge through instruction, example and experience.

Learning is the act of acquiring knowledge, skill or a behavioural tendency.

When both of these activities are combined we have the teaching/learning process.

Your developmental achievements affect whether or not you learn, as well as what and how you will learn.

Some of the key developmental characteristics that affect the teaching/learning process are:

- interest - something of absorbing attraction and motivation - what a person has a strong desire to do
- rate of learning - the speed at which you learn
- learning style - the way in which a person learns
- goal-orientation - a person's leaning towards learning or performance goals
- previous learning experience – whether attempts to learn have been rewarded or recognised



## Implications for teaching each stage

Students are unique in their own way, and each developmental stage adds to the students' character. In order for the potential success of the teaching/learning process to be realised, teachers must be aware of and responsive to the affect of the influence of developmental stages on students.

### Infant, Toddler and Preschool:

Students in the first three stages of development tend not to be as focused on specific *goals*. They are free flowing in their learning experience.

They are very *interested* in and *motivated* by opportunities for active sensory involvement; use of touch, taste, smell and sight.

The *rate of learning* is affected by their short attention span. Young learners tend to use an active rather than reflective learning style. This means that they tend to retain and understand best by doing or applying. As they develop, this active style is complemented with discussion.

### Child:

Students in this stage are still quite free flowing and explorative. Their primary *goal* is to explore as much and as far as they are allowed. They are *interested* in and *motivated* by active sensory involvement that allows them to repetitively do what they like doing and be in charge sometimes.

The attention span again affects the student's *rate of learning*. As the child grows his *learning style* will begin to develop in terms of active and reflective traits, visual and verbal traits, sequential and global traits.

Towards the end of this stage the student begins to develop more refined adaptation skills; that is the ability to add new information to old information and process it to make choices.

## Adolescent:



Adolescent students are *interested* in and *motivated* by group involvement and activity. Their attention span has developed considerably from previous stages but great discipline must be exercised to gain the benefit of increased learning.

Because of variable mood swings owing to personal focus or external stimuli the *rate of learning* is often negatively impeded. *Learning style* begins to expand to include sensing and initiative traits (learning facts and discovering possibilities). Increased abstract thinking and the ability to work independently enhance the planning and goal setting that becomes more necessary at this stage.

## Young Adult/Adult

Young adult students would tend to be very goal oriented, with high interest and motivation toward learning that is necessary to achieve their goals. Their rate of learning and learning style, which are a by-product of habits formed previously, are now recognisable. Adult learners have more experience to apply to knowledge acquisition. They are able to evaluate and adapt to improve efficiency.

## Characteristics of the adult learner



As a teacher of adult students it is imperative that you are aware of the unique traits of adult learners and have an understanding of the principles of adult learning.

**As a person matures:**

- (1) Self concept moves from dependency towards being self – directed: individuals who are voluntary learners believing that further education and or training will be beneficial.
- (2) They accumulate many experiences that become a foundation and resource in their learning.
- (3) Their readiness to learn becomes increasingly linked to improving performance in other social roles.
- (4) They need to see the immediate benefit of the knowledge not future application.
- (5) The motivation for learning changes from external to internal.
- (6) They move from learning about the subject to learning how to learn and solve problems.

**What is Andragogy?**

Andragogy is the science of helping adults learn. Where the traditional education system places great emphasis on subjects and teaching, adults respond to learner-focused education. In the traditional setting the learner is required to adjust to the curriculum; however, in adult education, curriculum adjustments must be made to suit the learners' needs. When attempting to educate adults, their vast array of knowledge and experience must be used in the process as a learning resource.

Psychology teaches us that we learn by doing; therefore, we must plan for practical application to be a part of the learning experience.

To achieve these desired outcomes the instructor must work tirelessly to create an environment which:

- is physically and psychologically conducive to learning
- fosters mutual respect among all participants
- emphasises collaborative modes of learning
- emphasises that learning is pleasant
- is supportive
- encourages win/win negotiations
- demonstrates that both student and instructor share the responsibility for learning



The following elements must be included to develop effective instructional models.

- involve learners in the assessment of their own learning needs
- encourage learners to formulate their own learning objectives
- encourage learners to identify resources and to devise strategies for using those resources to accomplish their objectives
- help learners carry out their learning plans
- involve the learners in the evaluation of their learning, primarily through the use of qualitative evaluative methods

The result of effectively applying these suggestions would be that the adult learner is encouraged to become self-directed while actively and productively participating in the teaching/learning process.



## Summary

- Teaching is imparting knowledge through instruction, example and experience
- Learning is acquiring knowledge, skill or behavioural tendency
- Some of the key development characteristics which affect the teaching/learning process are:
  - interest and motivation
  - rate of learning
  - learning style
  - goal orientation
  - previous experience of learning
- During each stage of development varying levels of the key characteristics are manifested
- Some characteristics of the adult learner include:
  - increased self-direction
  - varied experience
  - need to see immediate benefit
  - internally motivated to learn
- To be effective a teacher must adjust teaching strategies and develop creative learning environments that appropriately respond to the students' level of development.
- Adaptation skills – the ability to take in new information and process it for change – are refined through development.



## **Assignment Number 5.4 – 1**

### **Unit 5.4 Human Growth and Development**

You are now required to do the Assignment, 5.4 – 1 which may be found at the end of this unit or distributed by your Tutor.

## Section 3



### Individual differences which influence learning

No two individuals are the same. Even identical twins are uniquely different from each other. Managing these differences in the classroom is a definite challenge for all teachers.

Differences of particular interest in the classroom are those that affect the students' ability to grasp or learn what is being taught.

Learning can be defined as the process of obtaining information that results in a relatively persistent change in an individual's possible behaviour through experience.

This definition assumes that three things happen to confirm learning has taken place:

1. change occurs
2. the change is the result of an experience
3. it's a change in possible potential behaviour

### Learning Theories

There are two main perspectives or theories of learning. The first is called operant conditioning and has been developed by B. F. Skinner (1969)<sup>4</sup> who suggests that learning is an act which involves:

1. stimulus or situation with which the learner is confronted
2. the behaviour which the stimulus elicits from him
3. the reinforcement which follows the behaviour

Skinner describes learning as a process in which the learner is passively involved. The learner responds to a stimulus and the reinforcement received either strengthens or weakens the behaviour. For more detail, you should look again at Module 5.3.

The second theory has been developed by Bruner (1966)<sup>5</sup>. Bruner describes learning as an active process in which the learners are exposed to principles and rules, that the learners test out or explore for themselves.

<sup>4</sup> See bibliography for reference, page 71

<sup>5</sup> See bibliography for reference, page 71

Bruner suggests that learning is something that the learner makes happen based on how he handles or uses the incoming information. He emphasises that behaviour is not simply something elicited by a stimulus then reinforced, but is a complex activity that involves the following:

1. the acquisition of information
2. transformation of this information into a form suitable to the learner
3. testing and checking the adequacy of this transformation

Bruner further states that transformation of information depends on three methods or systems the individual uses to represent past experiences in the memory. Once the information is assimilated it can then be used to deal with the present.

These systems are:

1. the inactive mode: uses neither imagery or words; involves observable action.
2. the iconic mode: uses imagery and not language; depends on visual or other senses. This involves the learner having mental images without the language to define or describe them.
3. the symbolic mode: uses action, imagery and language (verbal and symbolic).

It allows for thought and learning which is abstract and flexible, and facilitates the consideration of proposition and concrete examples.

These systems are acquired one by one in childhood at ages determined both by environmental opportunities and maturation. The mature individual is able to use all three systems.

To stimulate the effective use of the three systems in learning, it is important to ensure that the following are built into the learning activity:

- a. motivation - or expectancy
- b. apprehending - the student perceives the material and form other competing stimuli
- c. acquisition - the student codes the information
- d. retention - the student stores the knowledge in memory
- e. recall – i.e. the student is able to recall the information from memory

- f. generalisation – the student applies the information to new situations to form new strategies
- g. performance – the new strategies are put into practise
- h. feedback – the results of the new practises are revealed

Now check your progress by completing the exercise that is found after the summary!



## Summary

- There are two primary learning theories:
  - B. F. Skinner's operant conditioning
  - Bruner's active learning process
- Operant conditioning says that everything we've learned is the result of stimuli response bonds.
- The active learning process says that learning happens based on how the learner processes incoming information.
- Bruner's three systems for cataloguing past information are:
  - Inactive mode
  - Iconic mode
  - Symbolic mode
- You must incorporate the following into all learning activities to help your students recall and link past information with new data:
  - Motivation
  - Acquisition
  - Apprehending
  - Retention
  - Recall
  - Generalisation
  - Performance
  - Feedback



### Activity 5

#### Check your progress

1. Define the term learning and state three assumptions implied by the definition.
2. List three activities involved in learning according to Bruner.
3. Briefly describe the three modes of cataloguing information.
4. State five elements that must be incorporated into a learning activity if long-term memory is to take place.

*Check your answers at the end of this section on page 49.*



## Areas of individual differences

Presented previously is the framework within which learning takes place for all learners. However, not all learners are alike. Some of the areas of individual differences that influence learning are:

- physical development and impairment
- rate of learning
- language mastery
- learning style
- emotional stability
- motivation
- level of maturity
- perception

### Physical Development and Impairment

In previous chapters we have discussed the physical differences that occur because of human development. For example, the adolescent student is physically different from the adult student. As a result in a technical/vocational setting the teacher must consider the physical development of the students. Physical development or impairment will determine a students' motor skills and agility e.g. whether a student can work effectively as a masonry student or a clothing-manufacturing student. The first requires above average physical strength while the other necessitates the use of fine motor skills with smaller muscles rather than the larger muscles.

If a student is physically challenged, s/he may be capable of learning theoretic components but not be able to perform the physical elements. In a technical/vocational workshop this is not practical and therefore requires that adequate assessment be conducted in order that students are placed to maximise their potential.

### **Rate of Learning**

The student's rate of learning is affected by:

- (a) intelligence: the ability to learn and apply abstract concepts
- (b) aptitude: the ability to acquire and use skills. The rate at which a student learns using both intelligence and aptitude is a product of the interaction of innate qualities and the opportunities for stimulation within the external environment. The student's ability to link old and new information quickly will determine how readily s/he can apply information and produce change.

### **Language Mastery**

This refers to the individual student's ability to understand and use acceptable words and symbols to give and receive information for effective operation within the learning environment. Without acceptable language mastery students are tremendously disadvantaged and could require specialised help.

### **Learning Style**

Each student has a personal learning style – some students learn more readily in response to visual or aural stimulation; others prefer to actually touch and experience as they learn. Learning styles do change as the student grows and develops. Because of the varied learning styles that may exist in each class, a good teacher always varies teaching strategies so that information is presented in a manner that each and every student can learn.

### **Emotional Stability**

A mild degree of anxiety can be a useful aid to learning while too much can be inhibiting. Emotional instability will hamper learning because it disturbs normal logical brain function.

By nature, some students are more extroverted while others are introverted. This is a function of individual personality tendency rather than anxiety.

The general rules of your institution will assist in keeping both personalities operating in a balanced fashion to aid learning.

### **Motivation**

Motivation is an inner thrust toward goal achievement. Each student's level of motivation is unique to them. If the student has obtained positive results in previous learning experiences, s/he will tend to be motivated to learn. Students at varying stages are motivated differently.

Motivation is needs based. If the learning is positively linked to a relevant need, then the level of motivation is higher. When intrinsic motivation is lacking, stimuli from the external environment must be creatively employed.

### **Level of Maturity**

No matter the area of individual difference the level of maturity of the student will determine the degree and manner of how the learning process will be affected. The students' level of maturity will determine how information and experiences are processed and used in the learning environment.

### **Perception**

This is the way the individual views things. It is the product of previous experience, socio-economic background, ethnic background, gender, emotional stability, physical development, maturity etc. Because of these and other stimuli, the student may view learning as a pleasurable and worthy achievement or not.



### **Factors that affect all individual differences**

The preceding individual differences are all the result of a number of contributing factors. Four factors that affect all individual differences are:

- socio – economic background
- previous experience
- ethnic background
- gender



## **Socio-economic Background**

Studies have shown that students from deprived social backgrounds tend to lag behind in learning because of having fewer facilities, less parental involvement and encouragement, and higher levels of emotional anxiety. The result of a deprived social background is often low self-esteem and lack of confidence, while the ability to focus and process new information is diminished.

## **Previous Experience**

If learning involves linking past knowledge with new knowledge, the student who has had a limited past will require additional help to process new information. Also, if the student's ethnic background does not provide recognisable language and cultural symbols with which to link the new information, the teacher will have to help to bridge the gap. The more relevant experiences which the student has had, the greater the likelihood that s/he will progress quickly and successfully.

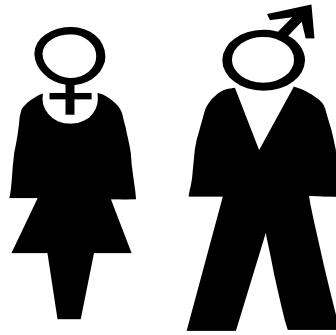
The fewer the relevant past experiences which the student has had, the greater the challenge for the teacher. The student will need more help to bridge the gap between existing knowledge and new information.

## **Ethnic Background**



The distinctive cultural group from which the student originates, will determine or greatly influence language, values, beliefs, habits etc. If students are not a part of the dominant cultural groups they will exhibit natural differences and have a different frame of reference within the learning environment. This will impact all learning experiences.

## Gender Differences



Gender differences are primarily the product of socialisation i.e. norms of the local society. However, in general, females tend to be better all-round students with stronger language skills while their male counterparts tend to perform better in areas or subjects they enjoy and that are more numerate in nature. In essence then, a person's gender will affect all areas of individual difference.

Now check your progress by completing the exercise that is found after the summary.



## Summary

- General factors that affect all areas of difference are:
  - Socio- economic background
  - Previous experience
  - Ethnic background
  - Gender
- Areas of individual differences are:
  - Physical development and impairment
  - Rate of learning
  - Language mastery
  - Learning style
  - Emotional stability
  - Motivation
- Student variables/individual differences are products of development.
- As the individual develops s/he is motivated to achieve new levels and perceive life differently.
- As a part of the maturity process the individual develops improved learning style, stronger language mastery and greater emotional balance. This enhances the ability of the student to understand and more effectively use old and new information to solve problems and improve the quality of life.

**Activity 6**  
**Check your progress**

- (1) Define the following terms:
  - a) aptitude
  - b) intelligence
- (2) State and describe three areas of individual differences that may affect learning.
- (3) List four factors that contribute to individual differences.

*Check your answers at the end of this section on page 50.*



## Answers to Activity 5

- (1) Learning is the process of obtaining information that results in a relatively persistent change in an individual's possible behaviour.

The following can be assumed from the above definition:

- change occurs
- the change is the result of an experience
- change in possible potential behaviour

- (2) Three activities involved in learning according to Bruner are:

- The acquisition of information
- Transformation of this information into a form which the learner can use
- Testing and evaluation of the transformation

- (3) The three modes of cataloguing information are:

- Inactive mode: focuses on observable actions without imagery of words.
- Iconic mode: depends on the use of the senses and imagery without language.
- Symbolic mode: uses action, imagery and language.

- (4) Five of the elements that must be incorporated into a learning activity are:

- motivation
- apprehending
- acquisition
- retention
- recall
- generalisation
- feedback



### Answers to Activity 6

- (1) Definitions:
  - a. Aptitude is the ability to acquire and use skills.
  - b. Intelligence is the ability to learn and apply abstract concepts.
- (2) Any three of the following areas of individual differences that affect learning:

Language mastery: which refers to how well a student can understand and use acceptable words and symbols in their environment.

Emotional stability: the degree to which students are able to maintain balance emotionally.

Rate of learning: the rate at which a student is able to link old and new information for future use.

- (3) Any four of the following factors that contribute to individual differences:
  - Socio-economic background
  - Previous experience
  - Ethnic background
  - Gender



## Assignment No. 5.4-2

### Unit 5.4 Human Growth and Development

You are now required to do the **Assignment 5.4 – 2**, which may be found at the end of this unit or distributed by your Tutor.



## Section 4



### Selecting teaching strategies

In the preceding sections of this unit, we have explored the key concepts involved in human development. We have discussed how development impacts the teaching/learning process. We have also discussed how all students progress through stages of development and how they are unique because of individual differences. We highlighted a number of differences that influence learning. These require the teacher to respond both knowledgeably and creatively to them.

In this fourth and final section, you will learn how to bring all of this information together to assist you in selecting appropriate teaching strategies. A **teaching strategy** is a technique that a teacher uses to stimulate the learner and creatively impart information. Once you are able to select appropriate teaching strategies based on some knowledge of students' developmental stages and individual differences, you will be well on the way to becoming a competent educator.

The task of the teacher is to stir up connections within the pupil's mind to keep the pupil exercised in the direction of learning. As educators enter the twenty-first century, the most critical challenge continues to be that of reaching the learner so that growth and achievement are maximised.

Unfortunately, the learning model most often used is one in which the students absorb information, retaining it to apply to specific questions in an exam. This practise often creates learner dependency and fails to develop a self-directed learner.

Educators today must be committed to providing opportunities for each student that will enable him or her to experience feelings of competence, belonging, usefulness, and optimism. These types of experiences will enhance the learners' ability to initiate and sustain learning throughout life.

### Prerequisites for selecting teaching strategies

Before you can effectively choose appropriate strategies and you must have some knowledge of the principles of learning, your own personal teaching style and the stages of learning.

## **What is your style?**

A prerequisite of choosing appropriate teaching strategies and helping students become self-directed, is an understanding of yourself. As a teacher you must be aware of your personal strengths and lesser strengths. These will greatly affect your initial choice of teaching strategies. An effective teacher must be able to adjust and vary his/her style of teaching to meet the varied needs and respond to the individual differences of students.

To help you further, let's learn about the four teaching styles developed by Gerald Grow<sup>6</sup> using Paul Hersey and Kenneth Blanchard's situational leadership model. The model assumes that teaching, like management, is situational. The students or employee's state of readiness (ability and motivation) are the key to choosing a teaching or management style.

### ***Teaching Style 1 (Directive)***

This style is described by the following verbs:

*tell, impart, transmit, give, propound, convey, expound, transfer, direct, fill, inform, coach, input, drill, and condition.*

It uses the transmission mode of delivery and is teacher-centred.

### ***Teaching Style 2 (Motivational)***

This style is described by the following verbs:

*develop, mould, produce, instruct, reinforce, prepare, direct, demonstrate, push, motivate, inspire, shape, drive, persuade, sell and train.*

It uses the transaction mode of delivery and is a blend of teacher and student centred activities.

### ***Teaching Style 3 (Facilitative)***

This style is described by the following verbs:

*lead, guide, initiate, help, show, point the way, explore, facilitate, discuss, share, participate, offer, suggest, negotiate, collaborate, and validate.*

It also uses the transaction mode of delivery and is a blend of teacher and student centred activities.

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<sup>6</sup> See bibliography for reference, page 71



### ***Teaching Style 4 (Consultative)***

This style is described by the following verbs:

*cultivate, encourage, nurture, develop, foster, enable, bring out, mentor, plant, challenge, and advise.*

It uses the transformation mode of delivery and is student-centred.

Which of these styles uses words that best describe you as a teacher? No matter which one does, to be effective you must be able to use all styles as you strive to meet each student's needs. If the goal of the educational process is to produce self-directed lifelong learning, then you must be able to assist learners in progressing from dependent learners to becoming self-directed learners.

### **Learning Stages**

No matter the learning or developmental stage of the learner when faced with a new task, the learner moves progressively through the four stages. As s/he becomes more proficient over time, the stage four level is achieved for that particular task.

| <b>LEARNER STAGE &amp; TEACHING STYLE MATCHES</b> |  |                |
|---|--|----------------|
| Stages  | Learner Characteristic   | Teaching Style |
| Stage 1<br>Dependent learners                     | Need an authority figure to give them explicit directions, learning is teacher-centred, treat teachers as experts.   | Direct         |
| Stage 2<br>Interested learners                    | Respond to efforts to motivate them, once shown the purpose, willing to complete tasks.  | Motivate       |
| Stage 3 Involved Learner                          | Students begin to see themselves as participants in their own education, identify and see the value of their own life experience and realise they have much to learn from and with others. | Facilitate     |
| Stage 4 Self-Directed Learner                     | Set their own goals and standards, exercise skills in time-management, project management, goal setting, self-evaluation, peer critique, information, and use of educational resources.    | Consult        |

As students progress through the stages of human development and are faced with new development challenges, they will manifest traits of dependency, interest, involvement and self-directedness in varying degrees. The teacher who is able to analyse the student's developmental stage, individual differences and learner stages effectively and then use the results of this analysis to choose both teaching style and strategies will be most likely to assist the learner to succeed.

Teaching style should be chosen based on the students' level of self-directedness. Teaching strategies should be compatible with the teaching style chosen e.g. directive teaching style is more compatible with a lecture than discussion.

### **Additional Information**

Some additional things to consider when selecting teaching strategies are:

1. The objectives
  - type and level of learning to be achieved
  - requirements of the task being taught
2. The learners
  - level of instruction
  - experience or prior knowledge
  - special needs
3. The instructional setting
  - class size
  - nature of the course (e.g. required or elective)
  - physical facilities
  - other institutional resources
  - time of the day
  - student's schedule

Now check your progress by completing the exercise that is found after the summary.



## Summary

- The task of the teacher is to stir up connections within the pupil to get him/her interested in learning.
- A teaching strategy is a technique, which a teacher uses to stimulate the learner and creatively impart information.
- The prerequisites for selecting teaching strategies are:
  - having knowledge of the principles of adult learning
  - knowing your personal teaching style.
  - knowing the stages of learning
- An effective teacher is able to vary his/her style to meet the varied needs and differences of students.
- The learning stage of the student progresses from dependent learner through to self-directed learner as efficiency is developed over time.
- To select teaching strategies you must also consider:
  - the lesson objectives
  - who the learners are
  - the instructional setting



### Activity 7 Check your progress

1. Which teaching style do these words describe?
  - (a) inform, drill \_\_\_\_\_
  - (b) lead, initiate \_\_\_\_\_
  - (c) develop, challenge \_\_\_\_\_
  - (d) mould , inspire \_\_\_\_\_
2. List the four stages of learning.
3. Describe the learner at each of the four learning stages.

***Check your answers at the end of this section on page 72.***



## Teaching strategies

In our previous discussions we have learned that each stage of development is characterised by unique achievements. Because of this, teaching strategies must vary according to the students' developmental stage to facilitate learning.

We have already discussed extensively the stages of human development, now let's discuss the major teaching strategies from which we have to choose.

### (1) Teaching strategies that are used to convey information.



#### ***Lecture:***

An oral presentation by the instructor that focuses on transmission of information to the learner.

Benefits:

- allows the instructor to address large numbers of students at once.
- allows large amount of data to be presented.
- allows the instructor to maintain control of the group.

To increase the effectiveness of a lecture it is necessary to supplement it with other strategies and teaching aids, which engage more of the learner's senses.

#### ***Symposium:***

Oral presentations by a cross-section of presenters on various subjects or topics.

Benefits:

- volumes of information presented.
- various presentation styles

**(2) Teaching strategies that pool thoughts and ideas.*****Discussion:***

A group of persons sharing thoughts and ideas on a topic. Reading material may be provided prior to discussion.

Benefits:

- allows learners to participate
- encourages learners to think
- encourages learners to listen
- can help to build confidence
- helps learners to stay on topic

***Brainstorm:***

A participative technique in which a problem is put forward to be solved. A specific period is given and the responses of group members are all recorded as they are given. At the end of the period the responses are evaluated and used based on value, to develop the best solution for the problem.

Benefits:

- uses knowledge and experience of the group
- discussion made in little time
- involves the group
- help group members to broaden their personal views
- encourages creative thinking

**(3) Teaching strategies used to teach a skill and allow practise.**

***Demonstration:***

A process in which the teacher/expert shows the students how to perform a skill. This can be followed by students being encouraged to perform what they have seen demonstrated.

Benefits:

- allows students to see theory practised correctly
- allows students to practise theory after seeing the standard performed
- allows students to get involved

***Simulation:***

A game or mock situation that is as close to reality as possible and requires students to work through the required steps.

Benefits:

- allows for hands on practise
- Allows for mistakes in a safe environment
- Allows students to explore alternatives without major damage
- Provides a type of real experience and emotional involvement for reinforcement

***Drill and Practise:***

The act of performing a skill repeatedly.

Benefits:

- learners are guided through first attempts verbally and physically
- learners practise until the standard is achieved
- learners are able to get clarification where needed

Other strategies in this category are:

- Shopwork and projects
- Internship
- Apprenticeship

**(4) Teaching Strategies that encourage student involvement:*****Field Trips:***

A planned visit and tour of a relevant industry location by a class of students.

Benefits:

- uses community and industry resources
- brings realism to learning
- provides a change of pace
- reinforces theory and shopwork
- expands students experience base

***Case Study:***

A written account of a real life situation that is presented to a group or individual students who are challenged to study the problem and offer solution(s).

Benefits:

- gets students involved
- allows students to objectively apply knowledge to a cross-section of real life issues
- improves investigative thinking
- challenges students to problem solve and apply good reasoning skills

***Buzz Groups:***

For a limited time a number of small groups of 3 – 6 persons are formed to discuss an assigned topic or problem. Each group must report their findings.

Benefits:

- encourages co-operation
- improves listening skills
- broadens each student's knowledge base.
- allows interaction
- encourages participation

***Role-play:***

A process where a problem is defined acted out and discussed. Involves some students as players and others as observers.

Benefits:

- allows students to explore feelings attitudes, values and perceptions
- can address heavy issues in a safe environment
- encourages learners to think on their feet

**(5) Teaching strategies which reinforce memory.**

***Recitation:***

The recital of points that have been taught.

***Drill:***

The repetition of key principles over and over so that they are remembered.

***Written work:***

Learners complete assignments involving key principles to aid learning.

**(6) Teaching strategies which stimulate deeper thought, creativity and independent thought.**

***Tutorial:***

Additional training or teaching sessions with the instructor to provide extra instruction or assignments.

***Self-paced study:***

Learners are allowed to complete work as quickly or as slowly as necessary to achieve the prescribed goal. The student is the principle element not the curriculum.

***Correspondence studies:***

Studies completed by students who are in a different location from that of the instructor(s). Assignments are completed and forwarded by mail or email to be graded and returned.

The list above is in no way intended to be exhaustive. It is to serve as a starting point in your development and exploration as a professional teacher. The world-class instructor is an artist in motion, constantly creating new strategies and methods to meet the ever-growing needs of their students.



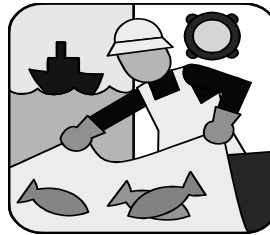
## Matching stages and strategies

| Developmental Stage     | Stage Characteristics                       |  |   | Learning Needs of Each Stage  | Teaching Strategies by Learning Needs  |
|-------------------------|---|--|---|---|--|
|                         | Physical                                    | Cognitive  | Psychosocial  |   |  |
| Infant                  | Rapid growth and skill development          | Learn through senses using hands, ears, eyes, tongue   | Move from total dependence to increasing independence and self-awareness  | - colourful, moving, touchable objects which produce sound – rhythmic environment   | Provision of items for sensual exploration   |
| Toddler/<br>Preschooler | Rapid growth and skill development          | Approximately 200 word vocabulary engage in imaginative make-believe play  | Move from total dependence to increasing independence and self-awareness  | - opportunities to tell own stories - real or make be believe<br>- opportunities to ask and answer questions, describe what they see hear, feel and think.  | Animated show/tell/sing discussions, projects, field trip, exploration opportunities, encouragement of group-led learning.   |
| Child                   | Strong physical skills eg. Running, jumping | Unable to apply principle <u>consistently</u> ; able to think more objectively but <u>focus</u> on tangible enjoy words. | Free spirited and aware of self-peer-group increases in importance.<br><br>The social support system affects ability to cope with stress. | - opportunities to use energy and physical skills<br>- opportunities to interact with the group<br>- exposure to information  | Projects, role-play, field- trips recitation, skill practise, case study, simulations, lecture, demonstration  |
| Adolescent              | Adult size shape and sexual potential       | Able to think of possibilities and engage in scientific thought can be egocentric and illogical. View self as invincible | Identify discovery is major challenge. Peer group most important. Lack of self-control and discipline causes conflict with adults.        | - confidence boosters, positive reinforcement.<br>- opportunities to share views<br>- structured exercises with deadlines<br>- opportunities to practise theory and develop skills<br>- opportunities to interact with group. | Discussion, buzz groups, case study, shop work, fieldtrips, projects, brain storming, simulation, lecture, symposium, demonstration, skill practise.                                   |
| Young Adult             | Strong mature healthy body                  | Adaptive topics can process fact and feeling or rational issues  | Self-expression centred on achievement and career.  | -knowledge which is relevant to personal pursuits.<br>-facts, problem solve<br>-practical application<br>-opportunities to share views and experience.  | -lecture, symposium, seminars<br>-case study, role-play<br>-demonstration, skill practise, projects<br>-discussion, buzz groups, brainstorming   |
| Adult                   | Strong mature healthy body                  | Dialectical thought: can process extremes of an idea and engaging in continual assessment and review                     | Career moves into a maintenance phase. Self-expression is focused more on developing quality relationships with family and community.     | -new relevant information<br>-interaction with group<br>-problem solve<br>-share views and experience<br>-assess and evaluate<br>-discover new options<br>-practical application  | -lecture, symposium, seminar<br>-discussions, buzz group, brainstorm<br>-case study, role-play<br>-demonstration, skill practise<br>-project, shop work<br>-tutorial, self-paced study |

Even though teaching strategies may be matched to developmental stages, individual differences may exist between students or group of students. Because of this, the instructor must remain observant and alert. Whenever results suggest that the information shared has been understood, adjustments in pace, methods and media may be necessary.

### **Practical examples of teaching strategies applied to developmental stages**

#### Example One



*Lucille is the home-economics instructor at the local Junior High School. This week she is teaching her students how to prepare a native dish using fish. She has decided to conduct each of the three classes as follows:*

**Class # 1**      Lecture to share background information on the ingredients; where they come from, how they are to be prepared before using in the recipe.

Allow questions and answers

Invites students to discuss how they have prepared the dish at home.

**Class #2**      Demonstrate the actual step-by-step preparation of the dish.

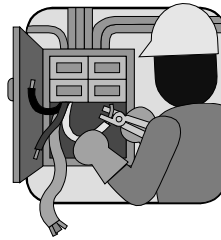
Demonstrate presentation of the finished product.

Allow tasting.

**Class # 3**      Students practise theory to develop skills.

This example illustrates the use of the lecture, demonstration, drill and practise and discussion.

### Example Two



*Barry teaches electronics at the country's evening technical and vocational training institution. His class is made up of adults from a cross-section of backgrounds who are doing the program for various reasons.*

*Last week Barry lectured and demonstrated to his students how to troubleshoot to find the cause of an appliance malfunctioning. He told them the steps and then showed them as he went through the process with two appliances. Students were allowed to ask questions and or make suggestions on how to improve the outcome.*

*Each student was given the following project for this coming week.*

- *Find an appliance that is not working well and follow the troubleshooting steps to analyse the cause of the malfunction.*
- *Write brief notes on what they did and prepare to discussion with the class.*

*At this week's class students will actually work on an appliance and attempt to find a solution to repair the problem.*

This second example illustrates the use of lecture, demonstration, simulation, project and discussion.



## Summary

- The major teaching strategies are:
  - Lecture
  - Symposium
  - Discussion
  - Brainstorm
  - Demonstration
  - Simulation
  - Drill and practise
  - Field trips
  - Case study
  - Buzz groups
  - Role play
- Teaching strategies are used to:
  - Convey information
  - Pool thoughts and ideas
  - Teach skill and allow practise
  - Encourage participation
  - Reinforce memory
  - Stimulate deeper thought
- The learning needs of each stage are unique and therefore teaching strategies to meet the relevant needs must also be suitably matched.
- Various strategies may be mixed and matched for each lesson to achieve the best possible results.



### Activity 8

#### Check your progress

1. Geneva is a seventeen-year-old student at Pompey Bay High School looking forward to enjoying the company of her friends.
2. Cameron is a fifth grade student who is very interested in the environment.

#### Answer the following questions:

Identify the developmental stages represented in the above scenarios.

What are the major learning needs of each student based on the developmental stage?

Which teaching strategies would best respond to these.

*Check your answers at the end of this section on page 73.*



### Teaching aids

To enhance the appeal of each strategy so that it meets a wider cross-section of individual differences supplement them with the following teaching aids.

- Display Aids
  - chalkboards/whiteboards
  - posters
  - flipcharts
  - pads of paper
  - cartoons
  - wall charts
- Projected Aids
  - films
  - filmstrips
  - overhead transparencies
  - slides
  - opaque projections

- sound projections
- sound or tape recordings
- television
- Three-dimensional aids
  - actual objects
  - mock-ups
  - models
  - pieces and parts
- Duplicated or printed aids
  - textbooks, reference books
  - handouts
  - prepared notes
  - job sheets
  - reading lists

When choosing an instructional aid, match the aid with the content of the lesson. For example, make a tape recording of the sounds in a sawmill, and use it to emphasise the importance of wearing hearing protection.



## Matching learning style to aids and resources

To determine learning style ask the following simple questions:

1. What type of information does the student understand more easily?

Sensory

or

Intuitive

Sights

memories

Sounds

ideas

Physical sensations

insights

2. Through which method is sensory information most effectively perceived?

Visual

or

Verbal

Picture

sounds

Diagrams

written

Demonstrations

spoken words

3. With which organisation of information is the student most comfortable?

Inductive

or

Deductive

Stated facts

stated principles

Observations

implied consequences

Implied principles

applications

4. How does the student prefer to process information?

Actively

or

Reflectively

Practical activity

introspective thought

5. How does the student progress toward understanding?

Sequentially

or

Globally

Small logical steps

large jumps



## Rules of thumb for teaching individual learning styles

The answers to these questions will help you determine what resource materials should be used to aid students with the various learning styles.

- Sensors need practical problems to solve with some rules.
- Intuitors need variety and challenge; room to experiment.
- Visual learners need visual images in pictures, diagrams etc.
- Verbal learners need written, spoken words.
- Inductive learners need examples and scenarios.
- Deductive learners need structure.
- Active learners need to be involved in demonstrations, experiments and discussions.
- Reflective learners need to work at their own pace as they think things through before acting.



## Summary

- Teaching aids are used to improve the appeal of teaching strategies.
- The major categories of teaching of teaching aids are:
  - Display aids
  - Projected aids
  - Three-dimensional aids
  - Duplicated or printed aids
- Learning styles are unique to individuals.
- A good teacher asks five key questions to determine learning style
- Teaching aids and resources are chosen based on learning style.



**Answers to Activity 7**

- (1)
- a. style one - Directive
  - b. style three - Facilitative
  - c. style four - Consultative
  - d. style two - Motivational
- (2)
- Dependent
  - Interested
  - Involved
  - Directed
- (3)
- |                     |  |
|---------------------|--|
| Dependent learner:  | Needs direction, treats teacher as expert  |
| Interested learner: | Responds to motivation, complete tasks once shown the purpose  |
| Involved learner:   | Sees self as participant in own education, knows value of own life experience, and recognises he can learn from and with others. |
| Directed learner:   | Sets own goals and standards, skilled in time management, project management, self-evaluation and use of educational resources.  |



## Answers to Activity 8

### Student # 1 Geneva

Developmental Stage: adolescence

Learning Needs: confidence boosters, opportunities for discussion, discipline through deadlines, skill practise

Teaching Strategies: discussion, case study, shop work skill practise, projects

### Student # 2 Cameron

Developmental Stage: child

Learning Needs: physical activity, exposure to new information, mental stimulation, social interaction

Teaching Strategy: games, simulations, field-trips, projects, lecture, demonstrations.



## Assignment No. 5.4 – 3

### Unit 5.4 Human Growth and Development

You are now required to do the **Assignment 5.4 – 3**, which may be found at the end of this unit or distributed by your Tutor.

# Bibliography

<sup>1</sup> Plomin, R (1989). Environment and Genes: Determinants of Behaviour. American Psychologist.

<sup>1</sup> Vasta, R., Haith, M. M., & Miller, S. A. (1992). Child Psychology: The Modern Science. New York: Wiley.

## **Summary:**

Jean Piaget (1896 – 1980) was a Swiss psychologist who served in several capacities in the areas of psychology, sociology and history of science at Neuchatel from 1925 – 1955.

<sup>2</sup> Piaget, Jean (1967) Six Psychological Studies. New York: Random House. (originally published as Six Etudes de Psychologie; 1964)

<sup>2</sup> Piaget, Jean (1972) Intellectual evolution from adolescence to adulthood. Human Development; 15, 1- 2.

## **Summary:**

Erik Erikson (1902) was a German born psychologist. He taught at Yale and Harvard Universities.

<sup>3</sup> Erikson, Erik H. (1963) Childhood and Society, (2<sup>nd</sup> ed.). New York: Norton.

<sup>3</sup> Erikson, Erik H. (1964) Identity, Youth and Crisis. New York: Norton.

## **Summary:**

B. F. Skinner (1904 – 1990) was a professor of psychology at Harvard University for many years. His work centred upon psychological research on learning processes.

<sup>4</sup> Bigge, Morris L., S. Samuel Shemis: Learning Theories for Teachers 5<sup>th</sup> ed., Harper Collins Publishers Inc. 1992.

## **Summary:**

Jerome Bruner served as the Director of the Harvard Centre for Cognitive Studies in the 1960's.

<sup>5</sup> Bruner, J. S. (1966). Toward a Theory of Instruction. Cambridge, Ma: Harvard University Press.

## **Summary:**

Gerald Grow is a professor of magazine journalism at Florida A&M University in Tallahassee.

<sup>6</sup> Grow, Gerald. (1991). "Teaching Learners to be Self-Directed." Adult Education Quarterly, 41, 125 – 149.

Berk, L. (2000). *Child Development*, (5th ed.). Needham Heights, MA: Allyn And Bacon.

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Lefrancois G. W. (1999). *The Lifespan*, (6th ed.). Belmont, CA: Wadsworth.

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## Assignment No. 5.4 – 1

To be completed and returned to your tutor for assessment.

Name: \_\_\_\_\_ Due date: \_\_\_\_\_

### Question 1

On the line at the left, write the letter that corresponds to the correct answer. There is only one correct answer for each term.

- |     |       |                              |   |  |
|-----|-------|------------------------------|---|--|
| 1.1 | _____ | Sensorimotor                 | A | the onset of puberty and growth spurt.                               |
| 1.2 | _____ | Psychosocial development     | B | the longest period of development                                    |
| 1.3 | _____ | Adulthood                    | C | understanding the world through touch                                |
| 1.4 | _____ | Teaching/learning process    | D | the development of emotional expression and temperament              |
| 1.5 | _____ | Adolescence                  | E | increasingly involved in and aware of the family and wider community |
| 1.6 | _____ | Adaptation                   | F | Changes in body and motor skill development                          |
| 1.7 | _____ | Social systems and the child | G | the ability to take new information and process it for change        |
|     |       |                              | H | imparting and acquiring knowledge                                    |

## **Question 2**

### **Define the following terms**

#### 2.1 Development

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#### 2.2 Myelinization

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#### 2.3 Andragogy

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#### 2.4 Animism

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**Question 3:**

List and briefly describe the three major areas of human development.

**Question 4:**

Explain how both nature and nurture are relevant to development.

**Question 5:**

State two reasons why knowledge of each area of development is significant to understanding your students and meeting their educational needs.

**Question 6:**

Briefly discuss three of the characteristics of adult learners and how each can affect the teaching/learning process.

**Question 7:**

Observe three students within a technical and vocational classroom; assess their responses, identify their developmental stage, in the three domains and report your findings. Briefly state what was observed to justify your conclusions.





## Assignment No. 5.4 – 2

To be completed and returned to your tutor for assessment.

Name: \_\_\_\_\_ Due date: \_\_\_\_\_

### Question 1

Instructions: Circle the letter 'T' if the answer is true and 'F' if the answer is false.

- |     |   |   |   |
|-----|---|---|---|
| 1.1 | T | F | The inactive mode uses either imagery or words.                             |
| 1.2 | T | F | B. F. Skinner developed the active learning model.                          |
| 1.3 | T | F | Learning style, motivation and emotional stability do not affect learning.  |
| 1.4 | T | F | Previous experiences and ethnic background affect individual differences.   |
| 1.5 | T | F | Student variables or individual differences are products of development.    |
| 1.6 | T | F | Applying knowledge to new situations help students to remember information. |

**Question 1: Instructions:** define the following terms.

2.1 Language Mastery

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## 2.2 Intelligence

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## 2.3 Aptitude

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### **Question 3**

a. List the three things that happen to confirm learning has taken place.

b. List four areas of individual difference.

### Question 4

- 4.1 Briefly compare and contrast B. F. Skinner's and Bruner's theories of learning.
- 4.2 List and define five items that should be built into a learning activity in order to stimulate effective use of the three learning systems, associated with Bruner's learning theory.

- 4.3 Discuss how differences in physical development, impairment, learning style and rate of learning would affect students in a technical and vocational learning environment. Give examples to support your answer.



## Assignment No. 5.4 – 3

To be completed and returned to your tutor for assessment.

Name: \_\_\_\_\_ Due date: \_\_\_\_\_

### Case Study

Read the following Case Study and answer the questions below.

*It's now September and all schools have opened for the new school year. Judy Ellis has accepted a new post at C. L. Jones Technical Evening Institute. She is challenged with teaching electronics to students from all walks of life with varied backgrounds and ages. There are times when all of these students could be in the same class or group at the same time.*

*Judy knows that a good teacher is responsible to meet the educational needs of each student in a manner that assists them with achieving their goals. As she ponders this, she thinks over some of the observations, which she has already made.*

*Roland and Max have just finished high school and don't seem to be able to answer the question of what they really want to achieve. The friends they hang out with have a very strong influence over their choices. "It's difficult for me to help if a student is not going to think for himself," Judy thought to herself.*

*Margo has been working for a number of years and has had some experience on the job. She is taking evening classes to enhance her natural talent, which she never took the time to develop before. Margo knows what she wants and is very focused.*

*A group of Judy's students are high school dropouts who have difficulties with basic reading and writing skills. They have not had any work experience and seem to require extra time with new concepts. Some of these students produce best results when they can practise what has been taught while others do best with written instructions, which they can study and follow step by step.*

*Another group of students is excited about attending the classes and seems to be very focused about the result they desire to accomplish. So each evening of class they come early, they're prepared with all tools and supplies and are very quick to follow the instructions given. Most of these students are presently working in jobs, which are relevant to the area of electronics.*

*Vernita stands out on her own. She has a physical handicap that poses additional challenges but she is a very bright student otherwise. One of Vernita's hands is slightly crippled and this makes handling the tiny elements challenging.*

*As Judy's thoughts trail off, the two retired gentleman stand out in Judy's mind. These two seem to be more interested in helping the other students get ahead than anything else. They just seem like they would make such great grandparents.*

*Judy remembers what she was supposed to be doing and tried to refocus her efforts on preparing her lesson plans for this colourful bunch of students.*

## Questions

1. What developmental stages and domains are there represented in the case? Substantiate your answer.
2. Are there individual differences presented in this case? If yes, discuss those presented and the potential impact on the student's progress.

3. Given the information presented in the case, what teaching strategies, teaching styles and aids would you recommend to Judy as she prepares her lessons. Please give reasons for your choices.
4. What other advice would you like to offer Judy from your personal experience and knowledge?