

# PSYCHOLOGY

**History-Literature in English-Psychology**

**S5**

**Student's Book**

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## FOREWORD

### Dear Student,

Rwanda Basic Education Board is honoured to present the Psychology Student Book for Senior Five, History-Literature in English-Psychology Combination. It was designed based on the Psychology curriculum to support its implementation.

This student book includes topics related to personality and learning psychology. These units equip you with basic knowledge, skills and attitudes that you need to understand different personality traits and how they influence behaviour, thought, motivation, and emotion in a human being; and use theories and principles of learning to deal with behavioural changes. Having understanding on individual differences due to the personality will help you to treat each person accordingly, avoid discrimination which may be based on different personality traits and sensitize people to respect each person regardless his/her individual personality.

This student book is made of ten (10) units designed in a way that facilitates self-study. Each unit starts with a key unit competence which represents abilities you are expecting to have by the end of the unit. This competence will be built progressively throughout the unit. The key unit competence is followed by an introductory activity that you are requested to attempt before any other contact with the content under the unit. The unit is then broken down into different sub-topics to help you to go step by step. Each sub-topic starts with an activity in which you are requested to engage. The content that follows each sub-topic is a summary that gives you clear definitions of concepts, explanations to complement what you have acquired through learning activities. At the end of each unit, there are assessments tasks/activities that give you an opportunity to demonstrate the level of achievement of the key unit competence.

For effective use of this textbook, your role is to: (i) Participate and take responsibility for your own learning: you are encouraged to engage in given activities to develop cooperation, communication, critical thinking, innovation and problem solving skills; (ii) Share with your classmates, relevant information through presentations, discussions, group work, lesson observation, field/classroom visit, group discussions, brainstorming, role play, case studies, interpretation of illustrations, research etc.; (iii) Conduct further research to enrich information provided under each topic (iv) Draw conclusions based on the findings from the learning activities.

Enjoy learning “Psychology, Senior Five” using your book!

**Dr. MBARUSHIMANA Nelson**

**Director General, REB**

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**MURUNGI Joan,**

**Head of CTLRD, REB**

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# Unit 1

## NATURE OF PERSONALITY

 **Key unit competence:** Demonstrate an understanding on how behavior, emotion, motivation, and thought patterns define an individual.



### Introductory activity: Scenario

In a class work, the teacher is distributing the exam copies to students. Kaneza got 15/50 and teared her paper upon seeing his marks. Jane started shading tears because she got 10/50. Their colleague Moses complained that the teacher must have made a mistake in marking, yet he had scored 14/50. Toto who had scored 5/50 said she he was comfortable with the marks and did not complain. Linda who had got 23/50 insulted the teacher and said she will not come back to class.

**Question 1:** Why do you think these students did not react in the same way, yet they all failed?

**Question 2:** In our everyday life, what do you think make people change in the way they behave?

### 1.1. Key concepts of personality (personality, nature)

#### Learning Activity 1.1



In a football match, some fans will jump up, others will run, others will fight, others will just smile and remain in their seats, there are even those will not smile. What makes those football fans to react differently to the scoring of a gaol their team?

## **Introduction**

Personality has a long history. It dates from the time of Greek physician Hippocrates (460-377 BC). In order to understand the behaviour of people in the organisational setting, we need to know the basic nature of personality. It is a psycho-social phenomenon, which analyses the cognitive features and presentation of individual in the society.

Psychologists have attempted to explain the concept of personality in terms of individuality and consistency. We often observe that people differ a great deal in the ways they think, feel and act and that too to different or even same situations. This distinctive pattern of behaviour helps one to define one's identity. Commenting upon the notion of individuality, it has been said that each of us in certain respects is like all other persons, like some other persons and like no other person who has been in the past or will be existing in future (Kluckhohn & Murray, 1953).

Another important notion in defining the concept of personality is consistency. In other words it can be stated that the concept of personality also rests on the observation that a person seems to behave somewhat consistently in different situations over different time. From this observation of perceived consistency comes the notion of personality traits that determine the way of responding to one's world.

Combining these notions of individuality and consistency, personality can be defined as the distinctive and unique ways in which each individual thinks, feels and acts, which characterise a person's response throughout life. In other words, it can be said that personality refers to all those relatively permanent traits, dispositions or characteristics within the person that give some measure of consistency to the person's behaviour. These traits may be unique, common to some groups or shared by the entire species but their pattern will be different from individual to individual.

### **Definition of personality**

“Personality is that pattern of characteristic thoughts, feelings, and behaviours that distinguishes one person from another and that persists over time”. These attributes make a person unique.

Personality of an individual is unique, personal and a major determinant of his behaviour. Because of differences in personality, individuals differ in their manner of responding to different situations. Some personality theorists emphasize the need to recognize the person-situation interaction, i.e., the social learning aspects of personality. Such interpretation is highly meaningful to the study of human behaviour.

For example, in the football match, the fans will react differently to the scoring of a goal by their team. Some will jump up, others will run, others will fight, others will just smile and remain in their seats, there are even those who will not smile. "It is the sum of biologically based and learnt behaviour which forms the person's unique responses to environmental stimuli"

Allport (1937, 1961), defined personality as the dynamic organisation within the person of the psychophysical systems that determine the unique adjustments to one's environment. This suggests that there is an inner personality that guides and directs individual's behaviour. Allport the man who has done more than anyone to shed light on the myriad meaning of the term personality analysed 50 definitions of personality, and finally put forward his own definition of personality mentioned above.

### **Factors influencing human personality**

Psychologists have tried to identify those factors which directly or indirectly influence the growth and development of personality. Although there are many factors, which influence the development of personality, such factors have been broadly grouped into three general categories and these are given below:

- Biological factors,
- Psychological factors,
- Environmental factors.

Since these factors tend to determine the way personality develops, they are also called as determinants of personality. These three sets of factors are discussed here in detail. There are many potential factors that are involved in shaping a personality. Some research pointed out heredity to be the most important factor influencing personality, but it was proven by other researches that the acquisition of values, beliefs, and expectations seem to be due more to socialization and unique experiences, especially during childhood.

#### **▪ Biological factors**

Biological determinants also called as physical determinants emphasise that physique and body functioning are directly responsible for personality development. Some of these factors are: (i) Body build (ii) Physical attractiveness (iii) Homeostasis (iv) Physical defects (v) Health conditions.

- i) Body build:** Body build influences personality directly by determining what an individual can and cannot do, as well as what the individual's reaction will be to all those whose body builds are superior or inferior. Some of the known body builds are (i) ectomorph (ii) endomorph, and (iii) mesomorph. **Ectomorphs** are persons who are tall and thin in their body builds.

They have been generally found to be superior to **Endomorphs** who have round and soft body builds. The superiority is especially in speed and endurance. Likewise, **mesomorphs** who are strong and muscular in their body builds have been found to be superior to both ectomorphs and endomorphs in activities like speed, endurance and agility.

It has also been reported that body build of an individual affects the person's self-concept, which is an important constituents of personality. This self-concept can be favourable or unfavourable. For instance, if the body build allows the person to do things that are socially desirable, prestigious and better than others it would contribute to positive self-concept about oneself. On the other hand, if it allows the person to do things which are not favourable or positive or ends up in failure, it would lead to poor or negative self-concept.

**ii) Physical attractiveness:** Physical attractiveness is another physical component that affects the development of personality. Brislin & Lewis (1968) have commented that it is very much rewarding to be with someone who is physically attractive. Generally, it has been found that people tend to be more tolerant in their attitudes and judgements of an attractive person. That is the reason why a pretty child is less likely to be punished or criticised for troublesome behaviour than a simple looking homely child. In business circle, an attractive worker may be less efficient and less conscientious than an unattractive worker and yet, the attractive worker is relatively more likely to get promotion sooner than the unattractive one.

**iii) Homeostasis:** Homeostasis is another important determinant. It refers to the maintenance of a stable internal environment through relatively having normal temperature, normal level of blood sugar, normal level of blood pressure, proper water balance, etc. When any of these conditions is upset, disequilibrium starts and disturbances in homeostasis result.

Homeostasis or disturbances in it, has a significant impact upon personality both directly and indirectly. Directly, the effect of homeostasis is seen in relaxed, controlled and socially acceptable behaviour patterns of the person who is feeling well both physically and psychologically. When the level of homeostasis is disturbed, behaviours like irritability, indigestion, insomnia and other uncomfortable states often result.

**iv) Physical defects:** Physical defects are another determiner. The first scientific study showing the impact of physical defect upon personality has come from Alfred Adler's theory of organ inferiority. Today several studies have been conducted to examine the direct and indirect impact of physical defects upon personality. *Obesity* is one of the popular physical defect.

Obesity proves to be a handicap in social relationship because the obese person is unable to keep up with his contemporaries. Obesity also affects the personality indirectly. Awareness of unfavourable attitude towards obesity makes the person feel not only inferior but also, they develop the feeling of being socially scorned.

Not only this, but some researchers have also pointed out that massively obese individuals become more disturbed perhaps because of less self-satisfaction and cumulative adverse comment from others.

- v) **Health conditions:** Health conditions also affect the development of personality. Many personality changes result from poor health conditions and tend to continue even after the illness has been cured or its severity has been lessened. This is especially true during childhood when the personality is in the formative stages. Many personality changes and disturbances in adolescents and adults have their root in illnesses during the early years of childhood (Martin & Vincent, 1960).

It has also been found that persons having illness like *diabetes*, etc., experience tension and anxiety which causes frustration in dealing with the demands of social environments.

As a result of frustration, they become aggressive and often turn their aggression towards others. Physical disturbances like the female irregular menstrual cycle often lead to emotional instability accompanied by a tendency to be irritable and depressed.

#### ▪ **Psychological factors**

Several psychological factors tend to determine the development of personality. Among those factors the following can be specially discussed because of their importance. These include: i) Intellectual determinants, ii) Emotional determinants, iii) Self-disclosure, iv) Aspiration, v) Achievements, vi) Goal setting.

- i) **Intellectual Determinants:** Researchers are of view that intellectual capacities influence personality through various kinds of adjustments in life and indirectly through the judgments other persons make of the individual on the basis of the person's intellectual achievements. This judgment in turn affects the evaluation and consequently the development of personality. Intellectually bright men and women make better personal and social adjustments than those of average or below average intelligence. However, having very superior intelligence affects personality development unfavourably because it creates special problems which are not encountered by those persons who are merely bright. These various problems result in the development of a personality pattern, which is characterised by the traits like negativism, intolerance, habits of chicanery, emotional conflicts, solitary pursuit, self-sufficiency, dominance, etc.

Evidences also have provided support to the fact that intellectual capacities also influence development of values, morality and human.

**ii) Emotional Determinants:** These are other important factors that shape the development of personality. Emotions are considered important personality determinants because they affect personal and social adjustment.

Research has shown that several aspects of emotions like dominant emotions, emotional balance, emotional deprivation, excessive love and affection, emotional expressions, emotional catharsis and emotional stress directly and indirectly affect the development of personality.

Likewise, since apprehensive persons are full of fear, they even when there is happy or enjoyable situation, feel depressed and remain afraid. Emotional balance which is a condition, in which pleasant emotions outweigh the unpleasant emotion, is considered essential to good social and personal adjustment. Some people experience a predominance of pleasant emotions while others experience a predominance of unpleasant emotions. This predominance affects the development of personality. The cheerful persons are usually happy and even when they are in a depressive mood they can see the brighter side of things.

When the person encounters with obstacles and problems, unpleasant experiences like fear, anger, envy and other negative emotions are aroused. As a consequence, the person's adjustments are adversely affected. Such conditions in the long run are responsible for development of many pathological traits in the person. Also, emotional deprivation of pleasant emotions like love, happiness and curiosity also has an impact, which gradually leads to poor personal and social adjustment.

Excessive love and affection also has psychologically negative effect. Sigmund Freud had earlier cautioned that too much parental love and affection awakens a disposition for neurotic disorders, spoils the child and makes the individual a problematic adolescent. Strecker (1956) has pointed out that excessive mothering, that is, overprotective mothers turn their sons and daughters into immature and dependent adults.

**iii) Self-disclosure:** Self-disclosure is considered basic to mental health and such disclosure helps to bring about a healthy personality pattern which is a guarantee for socially desirable and favourable reactions from others. Emotional stress expressed in the form of anxiety, frustration, jealousy and envy also affect the development of personality. A person who suffers from emotional stress makes good personal and social adjustments. Intense emotional stress may motivate the person to go to excesses in hope of being relieved from it.

For example, the person may resort to overeating and using drugs to dull the intense feeling of insecurity caused by emotional stress. It has been reported that women who experience greater degree of emotional stress during menstrual period, are found to develop depressive tendencies. Psychologists have shown that people with low self-esteem are more adversely affected by emotional stress than those with high self-esteem.

**iv) Aspiration:** These also have an effect on the development of personality. Aspiration means a longing for and striving for something higher than one's present status. Thus, aspirations are the ego-involved goals that persons set for themselves. The more ego-involved the aspirations are, the more will be the impact upon behaviour and therefore, greater will be the impact upon personality.

There may be various forms of aspirations such as positive aspiration (to achieve success), negative aspiration (to avoid failure), realistic aspiration (within the range of the person's capacity), unrealistic aspirations (beyond the capacity of the person), remote aspirations (to achieve a goal in the remote future) or immediate aspirations (to achieve a goal in the near future).

The motivating power of aspiration varies. In general, remote and realistic aspirations do provide stronger motivating forces than immediate and unrealistic aspirations. Negative aspirations are considered weaker in providing motivating strength than positive aspirations.

Level of aspiration, that is, the discrepancy between the goal an individual has achieved and the goal the person hopes to reach, affects the personality in terms of the size of the discrepancy. When the size of discrepancy is large, the person's self-concept is severely damaged especially if the person fails to achieve the goal. Not only the individual will judge self as failure, but others will also judge the person as a failure in particular if others know about the person's goal and that goal had not been achieved.

**v) Achievements:** Achievements can be evaluated objectively by comparing one's performance with those of one's peers and subjectively, by comparing the person's achievement with the level of aspiration. Success and failure are the two different attitudes of the person towards achievement. If the person is pleased with his own achievement, the achievement will be considered a success and this has a favourable impact upon the self-concept.

However, if the person's attitude towards achievement is negative, then the achievement will not be considered a success but a failure. Such persons will feel dissatisfied and miserable and in turn their self-concept will be adversely affected. Persons who feel that they have been successful remain satisfied with themselves and appear to be happy.

Besides building a favourable self-concept, achievement also raises the person's self-esteem and increases the level of self-confidence so that the individual can solve the many new problem of the future successfully. In addition to the personal satisfaction that a person derives from achieving the goal successfully, the achievement ensures that the person is appropriate in all the actions that are taken up, which in turn produce a stabilising impact upon the behaviour. Therefore, a successful person tends to be more relaxed than a person who has experiences of failure.

**vi) Goal setting:** Experimental evidences have shown that one of the most important effects that success has upon the person is that the individual becomes more realistic about goal setting. Such persons would set their goal to a point where they have reasonable chances of reaching. This behaviour is an obvious characteristic of intelligent, well-adjusted people than of those who are poorly adjusted.

Success enhances self-concept by increasing the person's prestige in the eyes of others. This enhances social acceptance and strengthens the individual's self-concept. But too much success during early years of life may, in fact, weaken the person's motivation to do one's best. It may cause the person to lose some of the new motivations which can be generated by early achievement. Extraordinary achievement even may prove to be more harmful than helpful to social relationship and not only that, it may arouse jealousy and resentment among those persons who are socially related to the person but somehow less successful.

Failure is another constituent of achievement. It is always ego-deflating. Failure undermines the self-confidence and self-esteem. Gradually, it destroys the person's belief that she or he can do something to achieve and this, in effect, weakens the motive to achieve even those things which are within his or her capability.

#### ▪ **Environmental factors**

Under environmental determinants, the following four sets of factors have been primarily emphasised: i) Social acceptance; ii) Social deprivation; iii) Educational factors; iv) Family determinants, v) Emotional climate of home and ordinal position, vi) Size of the family.

#### **i) Social Acceptance**

This is one of the major environmental determinants. Every person lives in a social group, which judges the person's behaviour in terms of the person's conformity to group expectations regarding proper performance behaviour and appropriate role playing. Thus, social judgement serves as basis for self-evaluation. In this

way, the social group tends to influence the development of self-concept.

The degree of influence the social group has on personality development depends not alone on how well accepted the individual is but also on how much importance social acceptance has for the individual. If the person places more value on group acceptance, that person will be more willing to be influenced by the group. Persons who are widely accepted and liked by the group, are likely to respond in a congenial and friendly spirit than those who experience hostility, disregard and rejection in the group.

Persons whose social acceptance is very high, are generally more outgoing, more flexible, more active and daring than those who are only moderately socially accepted or moderately popular. However, such persons often fail to establish close relationship with people. They also fail to show emotional warmth which is considered essential to close and intimate personal relationship. This sense of aloofness usually comes from a feeling of superiority.

One extreme opposite of social acceptance is social isolation. If a person develops the feelings of rejection due to social isolation when in fact he/she want to be accepted, he/she would develop the feeling of resentment against those who have rejected him/her. Such people are often depressed, sad and unhappy. They may develop sour-grapes attitude towards social activities. Such social rejection may lead the persons to become juvenile delinquents or criminals in the long run. Researchers have further shown that if early social experiences of the persons are favourable, they are likely to become social and if their experiences are unfavourable, they are likely to develop an unsocial or antisocial personality.

## **ii) Social Deprivation**

Social deprivation means being deprived of opportunities for various types of social contacts including love and affection. Social deprivation causes social isolation which has an adverse effect on personality. Social deprivation has proved most damaging for two age groups— the very young and the elderly. The young children who are deprived of contacts with parents / guardians fail to develop healthy and normal personality. Their behaviour is socially disapproved and they are also unfavourably judged by others.

Social deprivation in elderly people makes them self-bound and selfish, which gradually lead to unfavourable social and self-judgements. It has also been observed that social deprivation is far more damaging to people who want and also need social contacts for happiness than those who are self-sufficient or who voluntarily withdraw. For example, when elderly persons voluntarily decide on their own to withdraw from social activities, they are far happier and relatively well adjusted in comparison to those whose withdrawal is involuntary. If social

deprivation is extensive and prolonged, it gradually leads to unhealthy social attitudes and mental illness.

### **iii) Educational factors**

Schools, colleges and teachers have significant impact upon the individual's development of personality. The impact of educational institution upon personality development is largely determined by the students' attitude towards school and colleges, towards peers, towards teachers and also toward the value of education. When these attitudes are favourable, the students usually enjoy their academic activities and have a warm and friendly relationship with teachers and their peers. This has a very favourable impact upon the development of personality by producing stronger sense of self-confidence and self-esteem.

The reverse is true when there is unfavourable attitude amongst students towards education and educational institutions, teachers and peers etc. Research studies have further revealed that if the students are physically and psychologically ready to enter the school or colleges, their attitude tend to be far more favourable. Attitude towards educational institution is greatly influenced by emotional climate of the institution, which affects the level of motivation, students' classroom behaviour and their general emotional reactions. Through these various behavioural patterns, the emotional climate of the educational institution affects the students' self-evaluation, and the evaluation others make of them.

Another important factor of educational determinants that affect personality is student-teacher relationship, which is largely dependent upon the teacher's treatment of the students, upon students' attitude toward particular teachers and on their teaching as well as the disciplinary techniques used by the teachers including the cultural stereotypes of teachers as a group.

These attitudes, in turn, affect the quality of the student's academic work which becomes the basis of evaluation of self and social evaluation. Teacher student relationship affects the students' personality through its impact upon students' motivation for academic achievement.

### **iv) Family determinants**

The influence of family on personality development is maximal at all ages. The family affects the development of personality both directly or indirectly.

Direct influence of family upon personality comes chiefly through different child-training methods which are used to mould the personality pattern, and the communication of interest, attitude and values between members of the family. Strict, demanding, punitive and inhibiting parents / guardians tend to encourage their children for depending upon external controls to guide their behaviour.

As a result, when the children are outside the direct control of their parents/guardian, they tend to show impulsiveness in their behaviour.

Indirectly, through identification with parents, children develop a personality pattern similar to that of their parents. Experimental studies reveal that through imitation also, a certain personality pattern develops. For example, living with parents who are anxious, nervous and lacking the sense of humour produces in the children a sense of nervousness and frequent outburst of temper. Likewise, living with warm, affectionate, loving and interested parents generally produces social and gregarious persons. Such persons also develop an interest of welfare and affection for persons outside the home as well.

#### **v) Emotional climate of home and ordinal position**

Ordinal position refers to the eldest or youngest or middle or 2<sup>nd</sup> or 3<sup>rd</sup> child in the family. If the home climate is favourable, the person will react to personal problems and frustrations in a calm way and to people in a tolerant and cooperative way. On the other hand, if emotional climate of home is full of friction and conflicts, the person is more likely to develop a sense of hostility and may often tend to react to people in an aggressive way.

Studies have revealed that the firstborns tend to be more conforming and dependent than later borns. They are more affiliative, more susceptible to group pressures and more introverted. Firstborns who achieve greater success than the later born siblings tend to be selfish and self-centred.

The major personality characteristics of last borns, as shown by the various researches, are dependency, affiliative need, lack of self-confidence, lack of frustration tolerance, defiance of authority, etc. In comparison to the firstborns, most last borns have relatively weak achievement motivation. They are generally not pressed by the members of the family to achieve more nor do most families care to provide them with the opportunities that were provided to the firstborns. So far as the middle born or second borns are concerned, they are found to be generally less family oriented and more peer oriented. From their peer relationship, they develop such personality traits which produce better personal and social adjustment. As a result, they are more popular among the peers in comparison to the first or lastborn.

#### **vi) Size of the family**

This factor also affects the development of personality. In larger families, parents have little time to protect any child. As such, children learn to be independent and show maturity in their behaviour at an earlier age as compared to children of smaller families. However, larger families encourage certain personality characteristics that may hamper good personal and social adjustments. For

keeping the home environment reasonably calm, parents of larger families generally adopt authoritarian method of control, which produces a strong sense of resentment and rebellion among children.

In small families since parents devote enough time to care and provide proper guidance to each child, this produces self-confidence, self-assurance and eliminates the feeling of inadequacy which may come when the child is left to meet the problem alone. However, due to strict competition for getting parental attention, affection and approval in small families, jealousy and envy especially against the firstborns who are perceived to be parents' favourite, damages the self-concept of the concerned individual.



### Application activity 1.1

**Question 1:** What advice will you give to somebody who is overwhelmed by problems and stress?

**Question 2:** Why should we advise people to control their eating habits?

## 1.2. The concept of Personality: Temperament



### Learning Activity 1.2

Four students Bebe, Mado, Shaba, and Kodo were playing, in the middle of the match Mado stepped on Bebe and Bebe cried but did not revenge immediately. After 5 minutes, Kodo was hit by Shaba and immediately he revenged by slapping Shaba. The next day Bebe refused to greet Mado under pretext that he stepped on her the match the previous day.

#### Questions:

Among the two students Bebe, Kodo, whom would you like to live with or to work with ? why ?



### 1.2.1. Introduction

Socrates, one of the most renowned of the Greek sages, used and taught as an axiom to his hearers: “Know yourself.” One of the most reliable means of learning to know oneself is the study of temperaments. For if a man is fully cognizant of his temperament, he can learn easily to direct and control himself. If he is able to discern the temperament of others, he can better understand and help them.

Some researchers examine temperament globally by classifying youth varying in temperamental traits as easy, slow to warm up, or difficult.

Temperament refers to constitutionally based individual differences in emotional and behavioural responsiveness. Temperament manifests early in life and remains relatively stable throughout development. Similar to the construct of personality, which includes one’s social skills, beliefs, morals, and interpersonal relationships, temperament refers to biological and neurochemical underpinnings that influence the manifestation of personality (Deborá & Jill, 2017). Temperament is considered as a multidimensional construct, though there is some debate as to which dimensions best characterize temperament.

### 1.2.2. Dimensions of temperament



CHOLERIC



MELANCHOLIC



SANGUINE



PHLEGMATIC

If we consider the reaction of various people to the same experience, we will find that it is different in every one of them; it may be quick and lasting, or slow but lasting; or it may be quick but of short duration, or slow and of short duration. This manner of reaction, or the different degrees of excitability, is what we call “temperament.” There are four temperaments: the choleric, the melancholic, the sanguine, and the phlegmatic. The way they react to a similar circumstance will differ though similar to some extent. The following are different reactions manifested.

- **The characteristics of the choleric temperament**

**The choleric person** is quickly and vehemently excited by any and every influence. Immediately the reaction sets in, and the impression remains a long time.

The choleric man is a man of enthusiasm; he is not satisfied with the ordinary but aspires after great and lofty things. He craves for great success in temporal affairs; he seeks large fortunes, a vast business, an elegant home, a distinguished reputation or a predominant position. He aspires to the highest also in matters spiritual; he is swayed with a consuming fire for holiness; he is filled with a yearning desire to make great sacrifices for God and his neighbor, to lead many souls to heaven.

The natural virtue of the choleric is ambition; his desire to excel and succeed despises the little and vulgar and aspires to the noble and heroic. In his aspiration for great things the choleric is supported by:

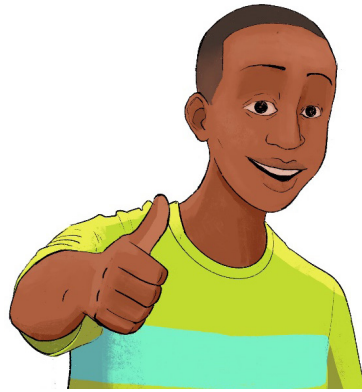
- **A keen intellect:** The choleric person is not always, but usually endowed with considerable intelligence. He is a man of reason while his imagination and his emotions are poor and stunted. It is said that Julius Caesar was able to dictate different letters to several secretaries at the same time without losing the line of thought for each dictation.
- **A strong will:** He is not frightened by difficulties, but in case of obstacles he shows his energy so much the more and perseveres also under great difficulties until he has reached his goal.
- **Strong passions:** The choleric is very passionate. Whenever the choleric is bent upon carrying out his plans or finds opposition, he is filled with passionate excitement. All dictators, old and new, are proof of this statement.
- **An often times subconscious impulse to dominate others and make them subservient:** The choleric is made to rule. He feels happy when he is in a position to command, to draw others to him, and to organize large groups.

## The dark sides of the choleric temperament:

- i) Pride:** which shows itself in the following instances:
- Is full of him/herself: considers himself as something extraordinary as one called to perform great feats. He considers his defects as justified.
  - Is very stubborn and opinionated: he thinks he is always right, wants to have the last word, and tolerates no contradiction and never willing to give in.
  - Has a great deal of self-confidence: relies too much on his knowledge and ability. He refuses the help of others and prefers working alone, partly because he does not want to ask for help because he believes that he is himself more capable than others and is sure to succeed without the help of others.
  - Despises his/her fellows: to his mind, others are ignorant, weak, unskilled, slow when compared to himself.
  - Is domineering and inordinately ambitious: wants to hold the first place, to be admired by others, to subject others to himself. He belittles, combats, even persecutes by unfair means those who dare to oppose his ambition.
  - Feels deeply hurt when humiliated or put to shame: Even the recollection of his sins fills him with great displeasure because these sins give him a lower opinion of himself. In his disgust over his sins, he may even defy God Himself.
- ii) Anger:** The choleric is vehemently excited by contradiction, resistance and personal offenses. This excitement manifests itself in harsh words which may seem very decent and polite as far as phrasing is concerned but hurt to the core by the tone in which they are spoken.
- iii) Deceit, disguise and hypocrisy:** He practices deceit, because he is in no way willing to concede that he succumbed to a weakness and suffered a defeat. He uses hypocrisy, deception, and even outright lies, if he realizes that he cannot carry out his plans by force.
- iv) Lack of sympathy:** The choleric, as said above, is a man of reason. He has two heads but no heart. Wars, torture, concentration camps, the death of millions of people meant nothing to modern dictators like Lenin, Hitler, Stalin, Mao Tse Tung, and their like.

If the choleric develops his faculties and uses them for good and noble purposes, he may do great things for the honor of God, for the benefit of his fellow men, and for his own temporal and eternal welfare. He is assisted by his sharp intellect, his enthusiasm for the noble and the great, the force and resolution of his will, which shrinks before no difficulty, and the keen vivacity which influences all his thoughts and plans.

## ▪ The sanguine temperament



The person of sanguine temperament, like the choleric, is quickly and strongly excited by the slightest impression, and tends to react immediately, but the impression does not last; it soon fades away.

### Characteristics of the Sanguine Temperament

- i) **Superficiality:** The sanguine person does not penetrate the depth, the essence of things; he does not embrace the whole but is satisfied with the superficial and with a part of the whole. Before he has mastered one subject, his interest relaxes because new impressions have already captured his attention. He loves light work which attracts attention, where there is no need for deep thought, or great effort. To be sure, it is hard to convince a sanguine person that he is superficial; on the contrary, he imagines that he has grasped the subject wholly and perfectly.
- ii) **Instability:** The sanguine is always changing in his moods; he can quickly pass from tears to laughter and vice versa; he is fickle in his views; today he may defend what he vehemently opposed a week ago; he is unstable in his resolutions. If a new point of view presents itself, he may readily upset the plans which he has made previously. This inconsistency often causes people to think that the sanguine person has no character; that he is not guided by principles.
- iii) **Tendency to the external:** The sanguine does not like to enter into himself but directs his attention to the external. In this respect, he is the very opposite of the melancholic person who is given to introspection, who prefers to be absorbed by deep thoughts and more or less ignores the external. This leaning to the external is shown in the keen interest which the sanguine pays to his own appearance, as well as to that of others, to a beautiful face, to fine and modern clothes, and to good manners. In the sanguine the five senses are especially active, while the choleric uses rather his reason and will and the melancholic his feelings.

- iv) **Optimism:** The sanguine looks at everything from the bright side. He is optimistic, overlooks difficulties, and is always sure of success. If he fails, he does not worry about it too long but consoles himself easily. His vivacity explains his inclination to poke fun at others, to tease them and to play tricks on them. He takes it for granted that others are willing to take such things in good humor and he is very much surprised if they are vexed on account of his mockery or improper jokes.
- v) **Absence of deep passions:** The passions of the sanguine are quickly excited, but they do not make a deep and lasting impression; they may be compared to a straw fire which flares up suddenly, but just as quickly dies down, while the passions of a choleric are to be compared to a raging, all devouring conflagrations.

### **The dark side of the sanguine**

- i) **Vanity and self-complacency:** The pride of the sanguine person does not manifest itself as inordinate ambition or obstinacy, as it does in the choleric, nor as fear of humiliation, as in the melancholic, but as a strong inclination to vanity and self-complacency.

The sanguine person finds a well-nigh childish joy and satisfaction in his outward appearance, in his clothes and work. He loves to behold himself in the mirror. He feels happy when praised and is therefore very susceptible to flattery. By praise and flattery, a sanguine person can easily be seduced to perform the most imprudent acts and even shameful sins.

- ii) **Inclination to flirtation, jealousy and envy:** The sanguine person is inclined to inordinate intimacy and flirtation, because he lacks deep spirituality and leans to the external and is willing to accept flatteries. However, his love is not deep and changes easily. Because he is easily influenced by exterior impressions or feelings of sympathy or antipathy, it is hard for the sanguine person to be impartial and just. Superiors of this temperament often have favorites whom they prefer to others. The sanguine is greatly inclined to flatter those whom he loves.
- iii) **Cheerfulness and inordinate love of pleasure:** The sanguine person does not like to be alone; he loves company and amusement; he wants to enjoy life. In his amusements such a person can be very frivolous.
- iv) **Dread of virtues which require strenuous efforts:** Everything which requires the denial of the gratification of the senses is very hard on the sanguine: for instance, to guard the eyes, the ears, the tongue, to keep silence. He does not like to mortify himself by denying himself some favorite food.

## Other disadvantages of the sanguine temperament:

- a) The decisions of the sanguine person are likely to be wrong, because his inquiry into things is only superficial and partial; also because he does not see difficulties; and finally because, through feelings of sympathy or antipathy he is inclined to partiality.
- b) The undertaking of the sanguine fail easily because he always takes success for granted, as a matter of course, and therefore does not give sufficient attention to possible obstacles, because he lacks perseverance, and his interest in things fades quickly.
- c) The sanguine is unstable in the pursuit of the good. He permits others to lead him and is therefore easily led astray, if he falls into the hands of unscrupulous persons. His enthusiasm is quickly aroused for the good, but it also vanishes quickly.
- d) Self-knowledge of the sanguine person is deficient because he always caters to the external and is loath to enter into himself, and to give deeper thought to his own actions.

## The bright side of the sanguine

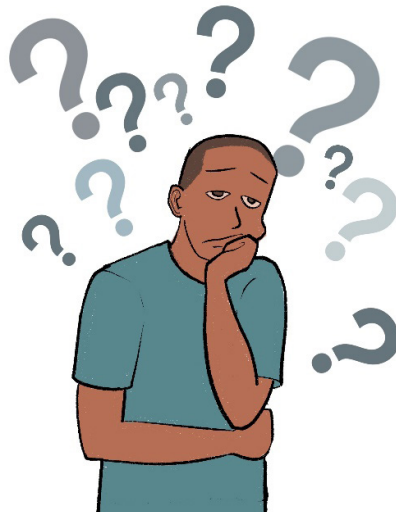
1. The sanguine person has many qualities on account of which he fares well with his fellow men and endears himself to them.
  - **The sanguine is an extrovert**; he readily makes acquaintance with other people, is very communicative, loquacious, and associates easily with strangers.
  - **He is friendly in speech and behaviour** and can pleasantly entertain his fellow men by his interesting narratives and witticisms.
  - **He is very pleasant and willing to oblige.** He dispenses his acts of kindness not so coldly as a choleric, not so warmly and touchingly as the melancholic, but at least in such a jovial and pleasant way that they are graciously received.
  - **He is compassionate whenever a mishap befalls his neighbor** and is always ready to cheer him up with a friendly remark.
  - **He has a remarkable faculty of drawing the attention of his fellow men to their faults without causing immediate and great displeasure.** He does not find it hard to correct others. If it is necessary to inform someone of bad news, it is well to assign a person of sanguine temperament for this task.
  - **A sanguine is quickly excited by an offence and may show his anger violently** and at times imprudently, but as soon as he has given vent to his wrath, he is again pleasant and bears no grudge.

2. The sanguine person has many qualities by which he wins the affection of his superiors.
  - **He is pliable and docile.** The virtue of obedience, which is generally considered as difficult, is easy for him.
  - **He is candid and can easily make known to his superiors his difficulties,** the state of his spiritual life, and even disgraceful sins.
  - **When punished he hardly ever shows resentment; he is not defiant and obstinate.** It is easy for a superior to deal with sanguine subjects but let him be on his guard! Sanguine subjects are prone to flatter the superior and show a servile attitude; thus, quite unintentionally endangering the peace of a community.
3. **The sanguine is not obdurate in evil.** He is not stable in doing good things, neither is he consistent in doing evil. Nobody is so easily seduced, but on the other hand, nobody is so easily converted as the sanguine.
4. **The sanguine does not long over unpleasant happenings.** Many things which cause a melancholic person a great deal of anxiety and trouble do not affect the sanguine in the least, because he is an optimist and as such overlooks difficulties and prefers to look at affairs from the sunny side.

## Conclusion

The education of the sanguine person is comparatively easy. He must be looked after; he must be told that he is not allowed to leave his work unfinished. His assertions, resolutions, and promises must not be taken too seriously; he must continually be checked as to whether he has really executed his work carefully.

## ▪ The melancholic temperament



The **melancholic** individual is at first only slightly excited by any impression received; a reaction does not set in at all or only after some time. But the impression remains deeply rooted, especially if new impressions of the same kind are repeated. Such an impression may be compared to a post, which by repeated strokes is driven deeper and deeper into the ground, so that at last it is hardly possible to pull it out again.

### The characteristics of a melancholic are:

- 1. Inclination to reflection:** The thinking of the melancholic easily turns into reflection. The thoughts of the melancholic are far reaching. He dwells with pleasure upon the past and is preoccupied by occurrences of the long ago; he is penetrating; is not satisfied with the superficial, searches for the cause and correlation of things; seeks the laws which affect human life, the principles according to which man should act.
- 2. Love of retirement:** The melancholic does not feel at home among a crowd for any length of time; he loves silence and solitude. Being inclined to introspection he secludes himself from the crowds, forgets his environment, and makes poor use of his senses – eyes, ears, etc. In company he is often distracted, because he is absorbed by his own thoughts.
- 3. Serious conception of life:** The melancholic looks at life always from the serious side. At the core of his heart there is always a certain sadness, 'a weeping of the heart,' not because the melancholic is sick or morbid, as many claim, but because he is permeated with a strong longing for an ultimate good (God) and eternity and feels continually hampered by earthly and temporal affairs and impeded in his cravings.

**4. Inclination to passivity:** The melancholic is a passive temperament. The person possessing such a temperament, therefore, has not the vivacious, quick, progressive, active propensity, of the choleric or sanguine, but is slow, pensive, and reflective. It is difficult to move him to quick action, since he has a marked inclination to passivity and inactivity.

### **The dark side of a melancholic**

If he falls into grievous sin, it is hard for him to rise again, because confession, in which he is bound to humiliate himself deeply, is so hard for him. He is also in great danger of falling back into sin; because by his continual brooding over the sins committed, he causes new temptations to arise. The melancholic who gives way to sad moods, falls into many faults against charity and becomes a real burden to his fellow men and women.

- i) He easily loses confidence in his fellow men, (especially Superiors, Confessors), because of slight defects which he discovers in them, or on account of corrections in small matters.
- ii) He is vehemently exasperated and provoked by disorder or injustice. The cause of his exasperation is often justifiable, but rarely to the degree felt.
- iii) He can hardly forgive offences. The first offense is ignored quite easily. But renewed offenses penetrate deeply into the soul and can hardly be forgotten. Strong aversion easily takes root in his heart against persons from whom he has suffered, or in whom he finds this or that fault.
- iv) He is very suspicious. He rarely trusts people and is always afraid that others have a grudge against him. Thus, he often and without cause entertains uncharitable and unjust suspicion about his neighbor, conjectures evil intentions and fears dangers which do not exist at all.
- v) He sees everything from the dark side. He is peevish, always draws attention to the serious side of affairs, complains regularly about the perversion of people, bad times, downfall of morals, etc.
- vi) He finds peculiar difficulties in correcting people. As said above he is vehemently excited at the slightest disorder or injustice and feels obliged to correct such disorders, but at the same time he has very little skill or courage in making corrections.

## ▪ **The phlegmatic temperament**

**The phlegmatic person** is only slightly excited by any impression made upon him; he has scarcely any inclination to react, and the impression vanishes quickly. The reaction is feeble or entirely missing.

### **Characteristics of the phlegmatic**

- He has very little interest in whatever goes on about him.
- He has little inclination to work but prefers repose and leisure. With him everything proceeds and develops slowly.

### **The bright side of the phlegmatic temperament:**

- The phlegmatic works slowly, but perseveringly, if his work does not require much thinking.
- He is not easily exasperated either by offenses, or by failures or sufferings. He remains composed, thoughtful, deliberate, and has a cold, sober, and practical judgment.
- He has no intense passions and does not demand much of life.

### **The dark side of the phlegmatic temperament**

- He is very much inclined to ease, to eating and drinking; is lazy and neglects his duties.
- He has no ambition, and does not aspire to lofty things, not even in his piety.

## **Conclusion**

The training of phlegmatic children is very difficult, because external influence has little effect upon them, and internal personal motives are lacking. It is necessary to explain everything most minutely to them, and repeat it again and again, so that at least some impression may be made to last, and to accustom them by patience and charity to follow strictly a well-planned rule of life. The application of corporal punishment is less dangerous in the education of phlegmatic children; it is much more beneficial to them than to other children, especially to those of choleric or melancholic temperament.

### **For the four temperaments,**

- The sanguine temperament is marked by quick but shallow, superficial excitability;
- The choleric by quick but strong and lasting excitability;
- The melancholic temperament by slow but deep excitability;
- The phlegmatic by slow but shallow excitability.

The first two also are called extroverts, outgoing; the last two are introverts or reserved.

### 1.2.3. How to determine one's temperament?

In order to determine one's temperament, it is not wise to study the bright or dark sides of each temperament and to apply them to oneself; one should first and foremost attempt to answer the three questions:

1. Do I react immediately and vehemently or slowly and superficially to a strong impression made upon me?
2. Am I inclined to act at once or to remain calm and to wait?
3. Does the excitement last for a long time or only for a short while?

Another very practical way to determine one's temperament consists in considering one's reactions.



#### Application activity 1.2

**Question 1:** What are the four temperaments that were discussed in this chapter?

**Question 2:** Who is a choleric person?

**Question 3:** From the description a sanguine person is a good character to work with. However, what behaviour of the sanguine that would upset you once you are in relationship with him/her?

**Question 4:** What temperaments with almost similar characteristics that can be grouped together?

## 1.3. Concepts of personality: Character, Traits, and Patterns

### Learning Activity 1.3



**Question 1:** With reference to the internet and other sources, explain what you understand by good or bad character of a person.

## 1.3.1. Character

### a. Introduction

Character is the core component - of humanity. As an organisation is known by its work culture, a government is known by its administration; a film actor known by his unique art; similarly, a person is known by his character. It gives a kind of recognition or reputation to an individual, and that makes all the-differences. Perhaps the term character is as old as human civilisation. It owes its origin to the old traditional systems of folk dance, drama and play where a particular person was being identified as a character represented in a play (Pradhan, 2009).

Cultivating good character among children and adolescent has become a ubiquitous role of parents, educators and theologians. Good character is morally valued by all human beings in all societies. Character refers to a cluster of positive personality traits and behaviours that are not only morally valued but are also at the heart of youth development. According to research, cultivating good character reduces the possibility of negative outcomes and promotes healthy development and thriving (Park and Peterson, 2009)

### b. Definition

According to (Collins Gem English Dictionary), “character means combination of qualities distinguishing an individual; moral strength, reputation or person represented in a play, film or story”. Thus character refers to the distinguishing feature or quality of an individual.

### c. Nature and growth of character

The course of the character formation is mainly gradual growth rather than inborn. It grows through activity, through effort, through taking responsibility, through the making of hard choices. The growth process is greatly affected by personal and social influences. The growth of character brings it an increasing integration, an integration that manifests itself, among other ways, in resistance to the various influences to which neurotic disorders of many kinds are due.

### d. Theory of character

Alexander Bain (1861) outlined the following points in attempt to elaborate the theory of character:

- i) That the character of a man is, not the whole, but a part only of his total personality.
- ii) That character is not innate, but rather is a product of gradual individual development; that as Goethe said, it is formed by taking part in the stream of the world in the battle of life,

- iii) That character is a highly complex organisation or structure, the units of which are the sentiments, the enduring likes and dislikes, the loves and hates, the admirations, respects and contempt which every man acquires for a large number of objects (for persons, for concrete things, far general and for abstract objects);
- iv) That the mere possession of sentiments (even though they may be many and strong) does not in itself constitute character.
- v) That rather, character is achieved by each man only in so far as his sentiments become organised in stable integrated system within which they operate and cooperate with some degree of harmony.
- vi) That individuals progress to various stages and forms of integration of the system of sentiments;
- vii) That since the possible forms of sentiment are very numerous and since the possible objects of sentiments are "all the choir of heaven and furniture of earth", and since the forms and degrees of integration of the system of sentiments are various, any attempt to classify the character of men under a few types is doomed to futility.
- viii) That character although may be validly distinguished from intellect, cannot be profitably all proposals to make it the object of a special science in any degree distinct from, or independent of, psychology, the way implied by such terms as ethology, praxeology, characterology and science of character.

#### e. Dimensions of character

Character can be of different types such as moral character, spiritual character, physical character or materialistic character.

- **Moral character:** It can be defined as the character of highest ethical standards mainly obeying law and order of society. Honesty, sincerity and courtesy are the fundamental elements of moral character.
- **Spiritual character:** Persons who possess spiritual characteristics believe that "God is omniscient, omnipotent and omnipresent. Realisation of Life, Karma, Birth, Rebirth, Death and Moksha are the constituent parts of spiritual character; Respect for all religions and secularism is two jewels of a spiritual character.
- **Physical character:** Character that maintains highest standards especially with opposite sex of all ages; married life is the crux of it: A man should not misuse his body' against friends, relatives and society at large. Lust should be avoided, and love must be propagated.

- **Materialistic character:** Every person has to obtain highest ethical standards in his job, occupation, business or profession. Person's motive should not be fulfilled by illegal means. Honest effort will bring peace and happiness in life.

#### f. Different aspects of character structure

Character seems to involve a combination of biological, sociological and psychological phenomena. A brief description of these is as under:

##### 1. Psychological aspects

Character refers to the personality characteristics and unique lifestyles found among individuals.

There are many different approaches and theories that explain and describe the structure and formation of character. These theories are grounded primarily in the Freudian concepts. Freud's earliest conception about character formation were based on libido theory, with its emphasis on psychological factors and proposed a classification of character in terms of the erogenous zones: oral, anal, phallic and genital. Freud proposed three dynamic aspects of personality: id, ego and superego. He viewed character as being an attribute of the ego (the self) with the superego (the conscience) the most decisive element in its development. On the other hand, Wilhelm Reich's (1925) departing from Freud's psychoanalytic determination emphasised the influence of the social order on character formation. He defined character structure as the crystallization of the sociological processes of a given epoch".

Contemporary theories of character development stress on two directions:

- a) The first begins by Freud and elaborated by psychoanalyst who emphasized on ego aspects, stems from Freud's instinctual drive theory (1931).
- b) The second was developed by neo - Freudian who emphasized on the role of cultural factors rather than instinctual roots in character formation.

Despite disagreements among school of thought, Gidycz's definition of character (1963) as "an adaptive synthesis of forces stemming from the biological givens, the quality of the infantile environment, the psychic structure, the character of the identifications and the mores of the social groups in which later maturation and development occurs" would be accepted to most behavioural scientists.

#### **Character types:**

Freud's (1908) classification describes the **psychological aspects of human character** as explained below:

- The **erotic** (relating sexual pleasure/ desire)

- The **obsessional** (those who engage in irrational thought)
- The **narcissistic** (a person who is having abnormal love and admiration for oneself)

Horney (1945) classified character into following three types:

- The aggressive neurotic character
- The detached character
- Character with idealized self-image and the character who externalizes (do not occur in pure form)

The relatively, arbitrary labels used by various disciplines and schools to classify the types of character refer to traits that influence behaviours.

## 2. Biological and social aspects

Since character structure seems to involve a combination of biological, social and psychological phenomena, the problem of developing an integrating theory is a difficult one. Many biological factors such as sex, age, race, organic disease and the influence of drugs, hormones and body fluid need to be researched and understood.

Sociological interest in juvenile delinquent has centred on that aspect of behaviour that is expressed in anti-social actions.

### 1.3.2. Traits

Personality has been conceptualised from many theoretical perspectives. Each has contributed to understanding of individual differences in behaviour and experience. However, so many personality scales to measure personality came about as a result of continuing research and one had not overall rationale to use a particular scale. Different terminologies have been used by researchers to interpret personality traits. Some researchers used personality factors, others used dimensions of personality and others preferred the term «personality traits».

Good enough, all the researchers described different personality characteristics that contribute to understanding of individual differences which are five in number. This five-factor structure has been replicated by many in lists derived from Cattell's 35 variables. These factors were initially labelled as (i) Extraversion or Surgency (ii) Agreeableness (iii) Conscientiousness (iv) Emotional stability versus neuroticism and (v) Culture. These factors came to be known as the Big Five which are broad categories of personality traits. In some literature, you may find that these traits are labelled differently.

It is due to the fact that researchers do not always agree on the exact labels for each dimension. However, these five categories are usually described as follows:

- a) **Extraversion:** This is also called as Surgency. The broad dimension of Extraversion encompasses specific traits as talkative, energetic, and assertive. More specifically these include characteristics such as excitability, sociability, talkativeness, assertiveness, and high amounts of emotional expressiveness.
- b) **Agreeableness:** This factor includes traits like sympathetic, kind, and affectionate. It also includes attributes such as trust, altruism, kindness, affection, and other prosocial behaviours.
- c) **Conscientiousness:** This includes traits like organised, thorough, and planful tendencies. Common features of this dimension include high levels of thoughtfulness, with good impulse control and goal-directed behaviours. Those high in conscientiousness tend to be organised and mindful of details.
- d) **Neuroticism:** This is sometimes reversed and called Emotional Stability. This dimension includes traits like tense, moody, and anxious. Individuals high in this trait tend to experience emotional instability, anxiety, moodiness, irritability, and sadness.
- e) **Openness to Experience:** This is also called as Intellect or Intellect/Imagination. This dimension includes traits like having wide interests and being imaginative and insightful. Those high in this trait also tend to have a broad range of interests.

These dimensions represent the broad areas of personality. Research has demonstrated that these groupings of characteristics tend to occur together in many people. Personality is complex and varied and each person may display behaviours across several of these dimensions.

### **Measurement of the Big Five Inventory (BFI)**

Big Five Inventory (BFI) is a self-report inventory designed to measure the Big Five dimensions.

It is quite brief for a multidimensional personality inventory (44 items total) and consists of short phrases with relatively accessible vocabulary.

The terms that are descriptive of personality can be used by individuals to describe themselves and others. For example, one could ask a question, "How talkative is Ram?" The answer could be in a continuum: Not at all (1); A little bit (2); Somewhat (3); Moderately (4) and Extremely (5).

**Each dimension varies between two extremes as described below:**

*Table 1: Big Five Traits*

<b>Dimension</b>	<b>Descriptions</b>
Extraversion	Dimensions of Personality ranging from sociable, talkative and enthusiastic at one end to sober, reserved, and cautious at the other.
Agreeableness	Dimensions of personality ranging from good natured, cooperative, trusting at one end to irritable, suspicious, uncooperative at the other.
Conscientiousness	Dimensions of personality ranging from well-organised, careful and responsible at one end to disorganised, careless, and unscrupulous at the other.
Emotional stability	Dimensions of personality ranging from poised, calm, and composed at one end to nervous, anxious, and excitable at the other; also called neuroticism.
Openness to Experience	Dimensions of personality ranging from imaginative, witty and intellectual at one end to down-to-earth, simple, and narrow in interests at the other.

### **Important characteristics of the Big Five Factors**

The following are some of the important characteristics of the five factors:

- First, the factors are dimensions, not types, so people vary continuously on them, with most people falling in between the extremes.
- Second, the factors are stable over a 45-year period beginning in young adulthood (Soldz & Vaillant, 1999).
- Third, the factors and their specific facets are heritable (i.e., genetic), at least in part (Jang, McCrae, Angleitner, Riemann, & Livesley, 1998; Loehlin, McCrae, Costa, & John, 1998).
- Fourth, the factors probably had adaptive value in a prehistoric environment (Buss, 1996).
- Fifth, the factors are considered universal, having been recovered in languages as diverse as German and Chinese (McCrae & Costa, 1997).
- Sixth, knowing one's placement on the factors is useful for insight and improvement through therapy (Costa & McCrae, 1992).



### Application activity 1.3

**Question 1:** With examples, discuss the dimensions of character.

**Question 2:** Describe the « personality traits » known as the Big Five

## 1.4. Personality (Nature vs Nurture)



### Learning Activity 1.4

**Question:** With reference to background you have in Developmental Psychology, discuss the influence of environment and heredity on human personality.

### 1.4.1. Concepts of Nature vs Nurture

Nature refers to how genetics influence an individual's personality, whereas nurture refers to how their environment (including relationships and experiences) impacts their development. Whether nature or nurture plays a bigger role in personality and development is one of the oldest philosophical debates within the field of psychology. To better understand the nature vs. nurture argument, it helps to know what each of these terms means.

**Nature** refers largely to our genetics. It includes the genes we are born with and other hereditary factors that can impact how our personality is formed and influence the way that we develop from childhood through adulthood.

Hereditary factors may be summed as constitutional biological and physiological factors. The constitution of an individual is an effective factor in determining the type of his personality. There are three types of personality: short and stout, tall and thin, and muscular and well proportioned. Height, weight, physical defects, health and strength affect personality.

Sex differences play a vital role in the development of personality of individual. Boys are generally more assertive and vigorous. Girls are quieter and more injured by personal, emotional and social problems. People should be mindful to the comments and compliments they make towards boys and girls. Some may be hurting others may be constructive.

For example, your genetically inherited physical appearance has an impact on how others see you and subsequently how you see yourself. In our everyday life, many girls are spoiled by the fact that they see themselves as beautiful or others compliment them in that way, thus indulging many of them in prostitution.

**Nurture** encompasses the environmental factors that impact who we are. This includes our early childhood experiences, the way we were raised, our social relationships, and the surrounding culture.

A few biologically determined characteristics include genetic diseases, eye color, hair color, and skin color. Other characteristics are tied to environmental influences, such as how a person behaves, which can be influenced by parenting styles and learned experiences.

For example, one child might learn through observation and reinforcement to say please and thank you. Another child might learn to behave aggressively by observing older children engage in violent behaviour on the playground.

Some scientists are biologically oriented, while others stress on environment and experiences. Currently, many developmental scientists see heredity and environment as fundamentally intertwined (Parke, 2004) and constantly interacting to mould the developing person. There are different aspects of environment that influence our personality:

### 1. The physical environment:

It includes the influence of climatic conditions of a particular area or country on man and his living. People from mountainous regions have personality which is different from the one of people in flat areas.

People living in hot regions behave differently from people in cold areas.

### 2. The social environment

The child has his birth in the society. He learns and lives there. Hence, the social environment has an important say in the personality development of the child. The child will adopt the behaviour of the group he/she is living in. Jean Jacques Rousseau said that every child is born good, it is the society that corrupts him/her, and this is true because parents realise that their child adopt some new behaviour the moment he/she goes to school.

### 3. Family environment

Bronfenbrenner's Ecological theory viewed the family as a network of interdependent relationships where each member influencing the behaviour of the other, in direct and indirect ways. The type of training and early childhood experiences received from the family play an important role in the development of personality.

#### **4. Cultural environment**

The cultural environment refers to certain cultural traditions, ideas, and values which are accepted in a particular society. The cultural practices, religious practices and other practices shape individual's personality. These include dressing styles, eating habits, taboos, etc.

#### **5. School environment**

As an agent of change, school plays an important role in moulding the personality of the children because a significant part of a child's life is spent in school between the ages of six and twenty years. The school poses new problems to be solved, new taboos to be accepted into the superego and new models for imitation and identification, all of which contribute their share in moulding personality.

### **1.4.2. Interaction between Nature and Nurture**

Which is stronger: nature or nurture? Many researchers consider the interaction between heredity and environment—nature with nurture as opposed to nature versus nurture—to be the most important influencing factor of all.

For example, perfect pitch is the ability to detect the pitch of a musical tone without any reference. Researchers have found that this ability tends to run in families and might be tied to a single gene. However, they have also discovered that possessing the gene is not enough as musical training during early childhood is needed for this inherited ability to manifest itself. Height is another example of a trait influenced by an interaction between nature and nurture. A child might inherit the genes for height. However, if they grow up in a deprived environment where proper nourishment isn't received, they might never attain the height they could have had if they had grown up in a healthier environment.

### **1.4.3. Contemporary Views of Nature vs Nurture**

Most experts recognize that neither nature nor nurture is stronger than the other. Instead, both factors play a critical role in who we are and who we become. Not only that but nature and nurture interact with each other in important ways all throughout our lifespan. As a result, many in this field are interested in seeing how genes modulate environmental influences and vice versa. At the same time, these debate of nature vs nurture still rages on in some areas, such as in the origins of homosexuality and influences on intelligence.

While a few people take the extreme nativist or radical empiricist approach, the reality is that there is not a simple way to disentangle the multitude of forces that exist in personality and human development. Instead, these influences include genetic factors, environmental factors, and how each intermingles with the other (Kendra, 2022).



### Application activity 1.4

**Question 1:** Discuss the aspects of nurture that influence individual's personality.

**Question 2:** Discuss the importance of interaction between nature and nurture in shaping individual's personality.

## 1.5. End Unit assessment



### End unit assessment


**Question 1:** Some parents adopt authoritarian type of parenting, and they are too strict to their children. What would you tell them regarding the consequences of such parenting on their children's personality in the future? What types of parenting would you advise them to adopt and the results it is likely to give in terms of children's future behaviour?

**Question 2:** Describe the problematic behaviour that will challenge you once you are in relationships with a choleric person.

**Question 3:** Describe the characteristics of the personality traits « Big Five » in terms of the two extremes.

# Unit 2

## MODERN TRENDS OF PERSONALITY

 **Key unit competence:** Judge the necessity of modern trends of personality.



### Introductory activity

#### Discussion question:

Discuss how digital technology especially the mass media is influencing men and women's personality in various dimensions.

### 2.1. Factors or dimensions of personality: Sex differences, Warmth, Emotional stability, Dominance, Liveliness, Social boldness, Sensitivity and, Openness to change.

#### Learning Activity 2.1



**Question 1:** It is known that the physical traits of men are different from those of women. How can these traits influence their personality traits, and we find differences between them?

#### 2.1.1 Introduction

In an effort to make the list of traits more manageable, Raymond Cattell (1946, 1957) narrowed down the list to about 171 traits. However, saying that a trait is either present or absent does not accurately reflect a person's uniqueness, because all of our personalities are actually made up of the same traits; we differ only in the degree to which each trait is expressed. Cattell (1957) identified 16 factors or dimensions of personality: warmth, reasoning, emotional stability, dominance, liveliness, rule-consciousness, social boldness, sensitivity, vigilance, abstractedness, privateness, apprehension, openness to change, self-reliance,

perfectionism, and tension ([link]). He developed a personality assessment based on these 16 factors, called the 16PF. Instead of a trait being present or absent, each dimension is scored over a continuum, from high to low. For example, your level of warmth describes how warm, caring, and nice to others you are. If you score low on this index, you tend to be more distant and colder. A high score on this index signifies you are supportive and comforting.

### Personality factors measured by Personality Factor Questionnaire

*Table 2: Personality factors measured by Personality Factor Questionnaire*

Factor	Low Score	High Score
Warmth	Reserved, detached	Outgoing, supportive
Intellect	Concrete thinker	Analytical
Emotional stability	Moody, irritable	Stable, calm
Aggressiveness	Docile, submissive	Controlling, dominant
Liveliness	Sober, prudent	Adventurous, spontaneous
Dutifulness	Unreliable	Conscientious
Social assertiveness	Shy, restrained	Uninhibited, bold
Sensitivity	Tough-minded	Sensitive, caring
Paranoia	Trusting	Suspicious
Abstractness	Conventional	Imaginative
Introversion	Open, straightforward	Private, shrewd
Anxiety	Confident	Apprehensive
Open-mindedness	Closeminded, traditional	Curious, experimental
Independence	Outgoing, social	Self-sufficient
Perfectionism	Disorganised, casual	Organised, precise
Tension	Relaxed	Stressed

Cattell's questionnaire helps individuals to see which personality traits dominate their personality and to what extent (low or high).

#### 2.1.2. The behaviour of male and female in different personality traits

The study was conducted on medical students to find out personality differences between male and female on various personality traits. The concerned traits are as follows: Warmth, reasoning, emotional stability, dominance, liveliness, rule-consciousness, social boldness, sensitivity, vigilance, abstractedness, privateness, apprehension, openness to change, self-reliance, perfectionism, and tension.

**The following table show the results of the comparison between both sexes for each trait:**

*Table 3: Behaviour of male and female in different personality traits*

Personality factor	Mean/Male	Mean/Female	With the trait domination
Warmth	4.90	5.97	Female
Reasoning	8.02	7.94	Male
Emotional stability	6.42	6.00	Male
Dominance	5.67	5.18	Male
Liveliness,	6.32	6.22	Male
Rule-consciousness	5.18	5.53	Female
Social boldness	5.75	5.81	Female
Sensitivity	4.15	6.26	Female
Vigilance	5.92	5.54	Male
Abstractedness	5.74	5.23	Male
Privateness	5.30	4.87	Male
Apprehension	5.37	6.31	Female
Openness to change	6.34	6.44	Female
Self-reliance	5.23	5.03	Male
Perfectionism	5.19	5.68	Female
Tension	4.93	5.29	Female

**Source:** Means and Standard Deviations of Personality Factors for Males and Females by Scott S. Meit, Nicole J. Borges, Barbara Cubic, and Hugo Seibel (2003).

Results of this study revealed that distinct personality differences existed between male and female medical students. Results suggest that female medical students are warmer and more outgoing (Warmth); more dutiful (Rule-Consciousness); more sensitive (Sensitivity); more self-doubting and worried (Apprehension); more organized and self-disciplined (Perfectionism); and more tense and driven (Tension) than their male counterparts. On the other hand, male medical students appear to be more adaptive and mature (Emotional Stability); more forceful and assertive (Dominance); more suspicious and sceptical (Vigilance); more imaginative and idea oriented (Abstractedness); more private and discreet (Privateness); and more solitary and individualistic (Self-Reliance) as compared to female medical students.

### 2.1.3. Sex differences

Despite the physical differences between males and females the finding of behavioural differences between the sexes is controversial. Behaviours associated with sex roles depend heavily on the social and cultural context, and studies of stereotypic male and female roles are therefore understandably ambiguous.

Yet some findings indicate small but consistent differences. While there are no differences in measured IQ itself regarded as a culture-bound assessment, females do better than males on verbal tasks. Girls generally begin to speak earlier than boys and have fewer language problems in school and in the course of maturation. Males generally exhibit greater skill in understanding spatial relations and in solving problems that involve mathematical reasoning. Beginning at the toddler stage, the activity level of males is generally higher than that of females. A related finding is that boys are more likely to be irritable and aggressive than girls and more often behave like bullies.

Men usually outscore women in antisocial personality disorders, which consist of persistent lying, stealing, vandalism, and fighting, although these differences do not appear until after about the age of three. A study by the American anthropologists Beatrice B. Whiting and Carolyn P. Edwards found that males were consistently more aggressive than females in seven cultures, suggesting that there is a predisposition in males to respond aggressively to provocative situations, although how and whether the attacking response occurs depends on the social and cultural setting.

### 2.1.4. Gender differences in Big Five personality traits

The investigation of personality differences is important to our understanding of general human variation, though it is not without controversy. Research on individual differences in intelligence, for example, has sparked years of scientifically and emotionally motivated debate (Neisser et al., 1996). Gender differences research has also proven to be controversial, with much of the debate concerning the causes and precursors of differences.

Biological and evolutionary approaches posit that gender differences are due to men and women's dimorphically evolved concerns with respect to reproductive issues, parental investment in offspring (Trivers, 1972; Buss, 2008).

According to these theories, women should be more concerned with successfully raising children and should therefore be more cautious, agreeable, nurturing, and emotionally involved. Men, on the other hand, should be more concerned with obtaining viable mating opportunities and should therefore exhibit more assertiveness, risk-taking, and aggression.

Other theories suggest that gender norms are shaped by socio-cultural influences, such that women and men are expected to serve different roles in society and are therefore socialized to behave differently from one another (Wood and Eagly, 2002; Eagly and Wood, 2005). Of course, it may well be that both evolutionary and social forces have contributed to gender differences. Interestingly, recent studies have shown that gender differences in personality tend to be larger in more developed Western cultures with less traditional sex roles (Costa et al., 2001; Schmitt et al., 2008).

### **a) Neuroticism**

Neuroticism describes the tendency to experience negative emotion and related processes in response to perceived threat and punishment; these include anxiety, depression, anger, self-consciousness, and emotional lability. **Women have been found to score higher than men on Neuroticism** as measured at the Big Five trait level, as well as on most facets of Neuroticism included in a common measure of the Big Five, the NEO-PI-R (Costa et al., 2001). Additionally, women also score higher than men on related measures not designed specifically to measure the Big Five, such as indices of anxiety (Feingold, 1994) and low self-esteem (Kling et al., 1999). The one facet of Neuroticism in which women do not always exhibit higher scores than men is Anger, or Angry Hostility (Costa et al., 2001).

### **b) Agreeableness**

Agreeableness comprises traits relating to altruism, such as empathy and kindness. Agreeableness involves the tendency toward cooperation, maintenance of social harmony, and consideration of the concerns of others (as opposed to exploitation or victimization of others). **Women consistently score higher than men on Agreeableness and related measures, such as tender mindedness** (Feingold, 1994; Costa et al., 2001).

### **c) Conscientiousness**

Conscientiousness describes traits related to self-discipline, organization, and the control of impulses, and appears to reflect the ability to exert self-control in order to follow rules or maintain goal pursuit. **Women score somewhat higher than men on some facets of Conscientiousness, such as order, dutifulness, and self-discipline** (Feingold, 1994; Costa et al., 2001). These differences, however, are not consistent across cultures, and no significant gender difference has typically been found in Conscientiousness at the Big Five trait level (Costa et al., 2001).

#### **d) Extraversion**

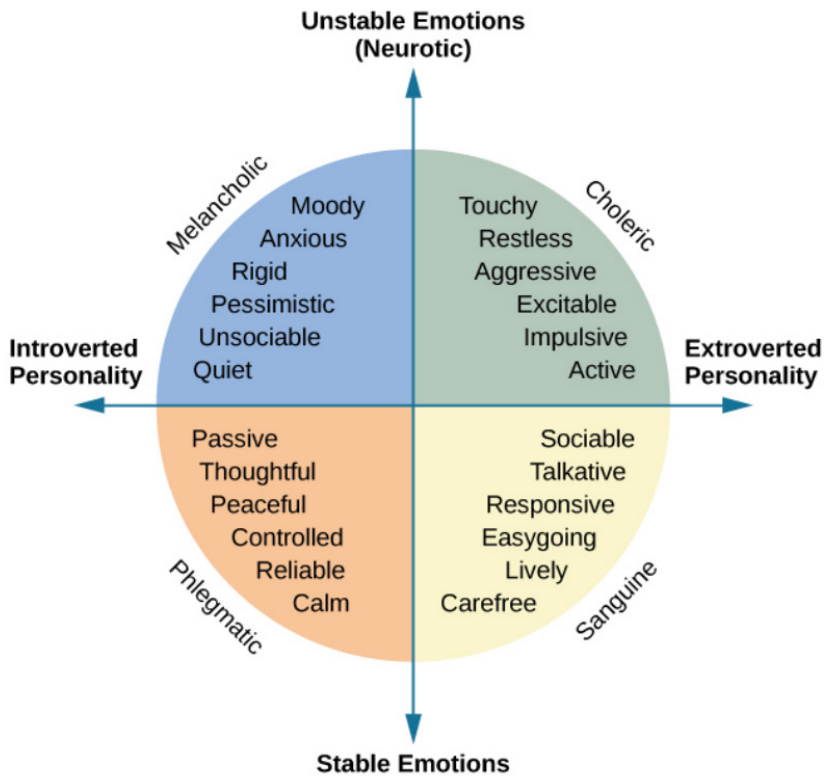
Extraversion reflects sociability, Assertiveness, and positive emotionality, all of which have been linked to sensitivity to rewards (Depue and Collins, 1999; DeYoung and Gray, 2009). Whereas gender differences are small on the overall domain level of Extraversion (with women typically scoring higher), the small effect size could be due to the existence of gender differences in different directions at the facet level. **Women tend to score higher than men on Warmth, Gregariousness, and Positive Emotions**, whereas men score higher than women on Assertiveness and Excitement Seeking (Feingold, 1994; Costa et al., 2001).

Given the importance of Extraversion to the interpersonal domain, it may be expected that women would consistently score higher than men. However, the pole of the IPC often called Dominance contains traits such as bossy, domineering, and assertive. **Men tend to be more dominant and agentic than women and exhibit higher levels of these traits** (Helgeson and Fritz, 1999). Gender differences in Extraversion may therefore switch directions depending on whether the specific traits measured fall closer or further from the dominance pole.

#### **e) Openness/Intellect**

Openness/Intellect reflects imagination, creativity, intellectual curiosity, and appreciation of aesthetic experiences. Broadly, Openness/Intellect relates to the ability and interest in attending to and processing complex stimuli. **No significant gender differences are typically found on Openness/Intellect** at the domain level, likely due to the divergent content of the trait. For example, women have been found to score higher than men on the facets of Aesthetics and Feelings (Costa et al., 2001), whereas men tend to score higher on the Ideas facet (Feingold, 1994; Costa et al., 2001).

Psychologists Hans and Sybil Eysenck were personality theorists who focused on temperament, the inborn, genetically based personality differences that you studied earlier in the chapter. They believed personality is largely governed by genetic inheritance (biology). The Eysencks (Eysenck, 1990, 1992; Eysenck & Eysenck, 1963) viewed people as having two specific personality dimensions: extroversion/introversion and neuroticism/stability.



The Eysencks described two factors to account for variations in our personalities: extroversion/introversion and emotional stability/instability.

Figure 1: Extroversion/introversion Vs Neuroticism/stability by Eysenck



### Application activity 2.1

**Question 1:** In which personality traits women are dominant and in which ones men dominate and why?

## 2.2. Aggression: Definition, biological and emotional causes of aggression

### Learning Activity 2.2



Observe the image below and answer to questions:



**Question 1:** What do you think, they are doing?

**Question 2:** Discuss other various acts you consider to be aggressive.

### 2.2.1. Introduction

#### Aggression

Aggression is a phenomenon that can take many forms, ranging from relatively minor acts (such as name calling or pushing) to more serious acts (such as hitting, kicking, or punching) to severe acts (such as stabbing, shooting, or killing). The fact that aggression appears in so many forms can sometimes make it difficult to determine whether or not aggression has occurred (Allen & Anderson, 2017).

Although the scientific definition of aggression has changed slightly over the years, the definitions utilized by aggression researchers have (mostly) converged to support a single definition. In social psychology, aggression is most commonly defined as a behaviour that is intended to harm another person who is motivated to avoid that harm (Bushman & Huesmann, 2010; DeWall, Anderson, & Bushman, 2012).

This harm can take many forms (as will be discussed throughout this chapter), such as physical injury, hurt feelings, or damaged social relationships (to name just a few). Although definitions vary slightly, highly similar definitions have been utilized by many prominent aggression researchers (Anderson & Bushman, 2002; Baron & Richardson, 1994; Berkowitz, 1993; Geen, 2001; Krahe, 2013).

For example, in order to better distinguish between certain subtypes of aggression, Anderson and Bushman (2002) more specifically defined human aggression as “any behaviour directed toward another individual that is carried out with the proximate (immediate) intent to cause harm. In addition, the perpetrator must believe that the behaviour will harm the target, and that the target is motivated to avoid the behaviour” (p. 28).

## **Violence**

The most common scientific definition of violence is as an extreme form of aggression that has severe physical harm (e.g., serious injury or death) as its goal (Anderson & Bushman, 2002; Bushman & Huesmann, 2010; Huesmann & Taylor, 2006). Like aggression, behaviour does not have to cause actual harm to be classified as violent. Attempting to fatally wound someone with a knife, but missing, is still considered a violent act, for example. Aggressive and violent behaviours are best conceptualized as being on a continuum of severity with relatively minor acts of aggression (e.g., pushing) at the low end of the spectrum and violence (e.g., homicide) at the high end of the spectrum.

Thus, all acts of violence are considered instances of aggression, but not all acts of aggression are considered instances of violence. For example, a child pushing another child away from a favoured toy would be considered aggressive but not violent. An extreme act, such as attempted murder, however, would be considered both aggressive and violent (with violent being the more descriptive term).

### **2.2.2. Biological and emotional causes of aggression**

#### **a) The role of biology in aggression**

When we see so much violence around us every day, we might conclude that people have an innate tendency, or even an instinct, to be aggressive. Some well-known philosophers and psychologists have argued that this is the case. For instance, the philosopher Thomas Hobbes (1588–1679) took this view, arguing that humans are naturally evil and that only society could constrain their aggressive tendencies- aggression is innate. On the other hand, the philosopher Jean-Jacques Rousseau (1712–1778) was more positive. He believed that humans are naturally gentle creatures who are aggressive only because we are taught to be so by our society-aggression is stimulated by the society.

Aggression is controlled in large part by the area in the older part of the brain known as the amygdala (Figure 9.5, “Key Brain Structures Involved in Regulating and Inhibiting Aggression”). The amygdala is a brain region responsible for regulating our perceptions of, and reactions to, aggression and fear. The amygdala has connections with other body systems related to fear, including the sympathetic nervous system, facial responses, the processing of smells, and the release of neurotransmitters related to stress and aggression.

When we experience events that are dangerous, the amygdala stimulates the brain to remember the details of the situation so that we learn to avoid it in the future. The amygdala is activated when we look at facial expressions of other people experiencing fear or when we are exposed to members of racial outgroups (Morris, Frith, Perrett, & Rowland, 1996; Phelps et al., 2000).

Although the amygdala helps us perceive and respond to danger, and this may lead us to aggress, other parts of the brain serve to control and inhibit our aggressive tendencies. One mechanism that helps us control our negative emotions and aggression is a neural connection between the amygdala and regions of the prefrontal cortex (Gibson, 2002).

The prefrontal cortex is in effect a control centre for aggression: when it is more highly activated, we are able to control our aggressive impulses. Research has found that the cerebral cortex is less active in murderers and death row inmates, suggesting that violent crime may be caused at least in part by a failure or reduced ability to regulate emotions (Davidson, Jackson, & Kalin, 2000; Davidson, Putnam, & Larson, 2000).

- **Hormones influence aggression: Testosterone and Serotonin**

Hormones are also important in creating aggression. Most important in this regard is *the male sex hormone* testosterone, which is associated with increased aggression in both animals and in humans. In one study showing the relationship between testosterone and behaviour, James Dabbs and his colleagues (Dabbs, Hargrove, & Heusel, 1996) measured the testosterone levels of 240 men who were members of 12 fraternities at two universities.

They found that the fraternities that had the highest average testosterone levels were also more wild and unruly, and in one case were known across campus for the crudeness of their behaviour. The fraternities with the lowest average testosterone levels, on the other hand, were more well-behaved, friendly, academically successful, and socially responsible. Another study found that juvenile delinquents and prisoners who have high levels of testosterone also acted more violently (Banks & Dabbs, 1996).

Testosterone affects aggression by influencing the development of various areas of the brain that control aggressive behaviours. The hormone also affects physical development such as muscle strength, body mass, and height that influence our ability to successfully aggress.

Testosterone is not the only biological factor linked to human aggression. Recent research has found that serotonin is also important, as serotonin tends to inhibit aggression. Low levels of serotonin have been found to predict future aggression (Kruesi, Hibbs, Zahn, & Keysor, 1992; Virkkunen, de Jong, Bartko, & Linnoila, 1989). Violent criminals have lower levels of serotonin than do nonviolent criminals, and criminals convicted of impulsive violent crimes have lower serotonin levels than criminals convicted of premeditated crimes (Virkkunen, Nuutila, Goodwin, & Linnoila, 1987). The aggressive participants who had been given serotonin, however, showed significantly reduced aggression levels during the game. Increased levels of serotonin appear to help people and animals inhibit impulsive responses to unpleasant events (Soubrié, 1986).

- **Drinking alcohol increases aggression**

Perhaps unsurprisingly, research has found that the consumption of alcohol increases aggression. In fact, *excessive alcohol consumption is involved in a majority of violent crimes, including rape and murder* (Abbey, Ross, McDuffie, & McAuslan, 1996).

Alcohol increases aggression for a couple of reasons. First, alcohol disrupts executive functions, which are the cognitive abilities that help us plan, organize reason, achieve goals, control emotions, and inhibit behavioural tendencies (Séguin & Zelazo, 2005).

Executive functioning occurs in the prefrontal cortex, which is the area that allows us to control aggression. Alcohol therefore reduces the ability of the person who has consumed it to inhibit his or her aggression (Steele & Southwick, 1985). Acute alcohol consumption is more likely to facilitate aggression in people with low, rather than high, executive functioning abilities.

Second, when people are intoxicated, they become more self-focused and less aware of the social situation, a state that is known as *alcohol myopia*. As a result, they are less likely to notice the social constraints that normally prevent them from engaging aggressively and are less likely to use those social constraints to guide them. For example, we might normally notice the presence of a police officer or other people around us, which would remind us that being aggressive is not appropriate, but when we are drunk, we are less likely to be so aware. The narrowing of attention that occurs when we are intoxicated also prevents us from being aware of the negative outcomes of our aggression.

When we are sober, we realize that being aggressive may produce retaliation as well as cause a host of other problems, but we are less likely to be aware of these potential consequences when we have been drinking (Bushman & Cooper, 1990).

### **b) Negative emotions cause aggression**

If you were to try to recall the times that you have been aggressive, you would probably report that many of them occurred when you were angry, in a bad mood, tired, in pain, sick, or frustrated. And you would be right—we are much more likely to aggress when we are experiencing negative emotions. When we are feeling ill, when we get a poor grade on an exam, or when our car doesn't start—in short, when we are angry and frustrated in general—we are likely to have many unpleasant thoughts and feelings, and these are likely to lead to violent behaviour. Aggression is caused in large part by the negative emotions that we experience as a result of the aversive events that occur to us and by our negative thoughts that accompany them (Berkowitz & Heimer, 1989).

One kind of negative affect that increases arousal when we are experiencing it is frustration (Berkowitz, 1989; Dollard, Doob, Miller, Mowrer, & Sears, 1939).

**Frustration** occurs when we feel that we are not obtaining the important goals that we have set for ourselves. We get frustrated when our computer crashes while we are writing an important paper, when we feel that our social relationships are not going well, or when our schoolwork is going poorly. How frustrated we feel is also determined in large part through social comparison.

If we can make downward comparisons with important others, in which we see ourselves as doing as well or better than they are, then we are less likely to feel frustrated. But when we are forced to make upward comparisons with others, we may feel frustration. When we receive a poorer grade than our classmates received or when we are paid less than our co-workers, this can be frustrating to us.

### **c) Other sources of aggression**

Although frustration is an important cause of the negative affect that can lead to aggression, there are other sources as well. In fact, anything that leads to discomfort or negative emotions can increase aggression. Consider pain, for instance. Berkowitz (1993b) reported a study in which participants were made to feel pain by placing their hands in a bucket of ice-cold water, and it was found that this source of pain also increased subsequent aggression. As another example, working in extremely high temperatures is also known to increase aggression—when we are hot, we are more aggressive.

Griffit and Veitch (1971) had students' complete questionnaires either in rooms in which the heat was at a normal temperature or in rooms in which the temperature was over 32 degrees Celsius (90 degrees Fahrenheit). The students in the latter condition expressed significantly more hostility.

Hotter temperatures are associated with higher levels of aggression ( Figure 9.7) and violence (Anderson, Anderson, Dorr, DeNeve, & Flanagan, 2000). Hotter regions generally have higher violent crime rates than cooler regions, and violent crime is greater on hot days than it is on cooler days, and during hotter years than during cooler years (Bushman, Wang, & Anderson, 2005).

### 2.2.3. Displaced aggression

Negative emotions do not always lead to aggression toward the source of our frustration. If we receive a bad grade from our teacher or a ticket from a police officer, it is not likely that we will directly aggress against him or her. Rather, we may displace our aggression onto others, and particularly toward others who seem similar to the source of our frustration (Miller, Pedersen, Earleywine, & Pollock, 2003).

Displaced aggression occurs when negative emotions caused by one person triggers aggression toward a different person. A recent meta-analysis has found clear evidence that people who are provoked but are unable to retaliate against the person who provoked them are more aggressive toward an innocent other person, and particularly toward people who are similar in appearance to the true source of the provocation, in comparison to those who were not previously provoked (Marcus-Newhall, Pedersen, Carlson, & Miller, 2000).

### 2.2.4. Can we reduce negative emotions by engaging in aggressive behaviour?

We have seen that when we are experiencing strong negative emotions accompanied by arousal, such as when we are frustrated, angry, or uncomfortable, or anxious about our own death, we may be more likely to aggress. However, if we are aware that we are feeling these negative emotions, we might try to find a solution to prevent ourselves from lashing out at others. Perhaps, we might think, if we can release our negative emotions in a relatively harmless way, then the probability that we will aggress might decrease.

The idea that ***engaging in less harmful aggressive actions will reduce the tendency to aggress*** later in a more harmful way, known as catharsis, is an old one. It was mentioned as a way of decreasing violence by the Greek philosopher Aristotle and was an important part of the theories of Sigmund Freud.

Many others believe in **catharsis** too. Russell, Arms, and Bibby (1995) reported that more than two-thirds of the people they surveyed believed in catharsis, agreeing with statements that suggested that participating in and observing aggressive sports and other aggressive activities is a good way to get rid of one's aggressive urges. People who believe in the value of catharsis use it because they think that doing so is going to make them feel better (Bushman, Baumeister, & Phillips, 2001). The belief in catharsis leads people to engage in popular techniques such as venting and cathartic therapies or even to play violent video games (Whitaker, Melzer, Steffgen, & Bushman, 2013); even though numerous studies have shown that these approaches are not effective.

The increases in aggression that follow from engaging in aggressive behaviour are not unexpected—and they occur for a variety of reasons. For one, engaging in a behaviour that relates to violence, such as punching a pillow, increases our arousal.

Furthermore, if we enjoy engaging in the aggressive behaviour, we may be rewarded, making us more likely to engage in it again. And aggression reminds us of the possibility of being aggressive in response to our frustrations. In sum, relying on catharsis by engaging in or viewing aggression is dangerous behaviour—it is more likely to increase the flames of aggression than to put them out. It is better to simply let the frustration dissipate over time or perhaps to engage in other nonviolent but distracting activities.



### Application activity 2.2

**Question 1:** Explain biological causes of aggression.

**Question 2:** How is displaced aggression done?

## 2.3. Aggression: The influence of social situation on aggression



### Learning Activity 2.3

**Question 1:** Explain why most students bully others.

**Question 2:** What can we do to eradicate bullying in schools?

### 2.3.1 Introduction

Aggression is one of the most primitive adaptive behaviour that has been used not only by human being, but also by other species. In the primitive societies, survival was dependent upon the ability to overpower the physical might of others by being hostile and aggressive towards them. However, technological advancements have brought about different more fatal, though easier, ways of expressing aggression. Now, there are many sophisticated weapons that are easily available and can be smoothly operated in interpersonal aggressive and hostile moments. Moreover, many weapons of mass destruction have been developed by nations and the world always faces fear that these weapons may be used by any country out of individual insanity and stupidity of dictatorial heads of some of these nations.

Thus, aggression, anger and hostility form an extreme form of social behaviour and therefore, social psychologists have attempted to explore various aspects of aggression, such as the process of expression of aggressive behaviours, factors that affect aggression, strategies and techniques to reduce aggression, etc.

### 2.3.2. Definition of aggression from the social point of view

Aggression is defined as a behaviour that is aimed at producing physical or psychological harm to another person. Anderson and Bushman (2002) have defined human aggression as “any behaviour directed toward another individual that is carried out with the proximate (immediate) intent to cause harm. In addition, the perpetrator must believe that the behaviour will harm the target and that the target is motivated to avoid the behaviour”. Bandura (1973) has defined aggression as “a harmful behaviour which violates social conventions, and which may include deliberate intent to harm or injure another person or object”. Buss (1961) defined aggression as “a response by an individual that delivers something unpleasant to another person”.

Thus, aggression encompasses a range of behaviours in our social interactions that intends to harm others, either directly or indirectly. Aggressive behaviour often involves some physical act of violence intended to cause physical injury to the target person, e. g. hitting someone either by any weapon or even by using any part of our body. Verbal aggression involves behaviours by which we intend to emotionally hurt others by using hostile language. Many times we intimidate others by using non-verbal gestures that imply a threat of violence. Furthermore, indirect expression of displeasure or a subtle anger is also a form of passive aggression. Many times, when we fail to express our aggression directly to our boss, we passively show our aggression by deliberately not completing the assigned job or by completing the task with very poor quality.

### 2.3.3 Social learning approaches to aggression

Contrary to the innate instinct and drive perspectives, social learning approach proposes that *aggressive behaviours are learned in the same way as we learn other social behaviours* (Bandura, 1997). Aggressive behaviours are learned *either by direct experience or by vicarious conditioning*, observing aggressive social models. Learning of aggression by direct experience occurs when a person's aggressive behaviour is rewarded and reinforced in a given situation.

On the other hand, *aggressive behaviours can be learned by merely observing models attaining their goals by aggressive behaviours*. Apart from such live modelling, we can learn aggressive behaviours by watching aggressive/violent movies and television programmes and by playing aggressive video games also.

Social learning approach further suggests that even the aggressive behaviours are once learned, they are latently stored in the behaviour reservoir of the individual. Expression of these behaviours in any given situation is dependent on number of factors related to person's experiences in similar situations in the past, such as rewards or punishments received for aggressive behaviour in similar situations in past. Social learning also helps us in understanding the appropriate and socially approved ways and targets of aggressive behaviour in a situation.

### 2.3.4. Interpersonal, social and cultural factors

#### a) Exposure to mass media and aggression

A content analysis conducted by the US National Television Violence Study has reported that almost 60% of TV programmes contain significant amount of violence. Studies conducted using various methods have consistently reported that children and adults exposed to violent content in the mass media, such as TV programmes, films, video games, etc., tend to more engage in violent and aggressive behaviours. In one of such studies by Bandura, Ross and Ross (1963), children were exposed to one of the two types of virtual models through TV shows. One group of children was exposed to an aggressive model; whereas, the other group of children was exposed to a non-aggressive model. The researchers reported that the children who were exposed to the aggressive models expressed similar behaviours and played in aggressive and violent ways with the toys. Similar results have been reported in the studies that have used violent news, violent lyrics in music and violent video games as materials to foster modelling (Anderson, 2004).

## **b) Social Rejection**

Social rejection is one of the strongest instigators of human aggression. Human beings enjoy social relations and when we are excluded from the society, it negatively impacts our self-image and self-esteem and further leads us to become hostile and aggressive in social interactions. Studies have been reported showing that when we are rejected by others, it stimulates a hostile cognitive mind-set or bias which inclines us to perceive others' ambiguous and largely neutral behaviours as hostile. In such situations this bias leads us to respond in aggressive way (De Wall et al., 2009). From evolutionary perspective, we require to associate with others in society in order to fulfil our basic biological and social needs, and to survive. However, when we are socially rejected, fulfilment of this need is thwarted, and our survival is jeopardised; leading to stimulation of instinct and responding in aggressive way.

## **c) Influence and need fulfilment**

Another approach that tries to understand human aggression proposes that aggression is a way to exert influence on others' behaviour in social interactions and using this influence as a mean to get their needs fulfilled. However, aggression is used as a mean of social influence in specific situations, such as when we believe that being aggressive will obtain success and the target is unlikely to retaliate.

### **2.3.5. Reducing aggression**

As a complex social behaviour, aggression is an outcome of interaction between personal, interpersonal, social and cultural factors and is expressed in overt behaviour when it is triggered by some situational and environmental variables. Thus, a number of strategies are proposed by social psychologists in order to reduce or control aggressive behaviour.

#### **a) Social learning: Punishment and modelling**

The behavioural and social learning approaches of psychology assume that undesirable aggressive behaviour is learned with the same process as adaptive social behaviours are learned. The most traditional and common approach to deter aggressive behaviour is using punishment. Punishment works on the principles of operant conditioning which assumes that the strength of association between the stimulus and the response will be weakened if an aversive consequence or outcome is made contingent upon the response. Therefore, the likelihood of aggressive behaviour is decreased when the consequence of an aggressive behaviour is made painful or aversive. However, punishment is a risky strategy, and some care is required to be taken before using it.

For example, punishment should be given immediately after the aggressive behaviour, each and every aggressive behaviour should follow punishment in order to avoid confusing conditioning, punishment should be strong, and it should also be justified with sufficient explanation and reasoning.

Observational learning theories of social learning approach assume that as aggressive behaviours are learned by observing aggressive social models, these behaviours can be prevented and controlled by exposing the people to non-aggressive models or to the models who are involved in pro-social behaviours. Bushman and Anderson (2002) argued that exposure to violent media cognitively primes us to respond in aggressive way. Therefore, probability of developing such cognitive biases is significantly reduced if we are exposed to non-aggressive models, leading to decreased sensitivity to the environmental triggers of aggressive behaviour. Furthermore, exposure to the models involved in pro-social behaviours strengthens adaptive social behaviours.

### **b) Catharsis**

Catharsis of aggression is expression of one's aggressive intent at a target that is in some way associated with the original source of aggression in some relatively non-harmful manner. There is an assumption that catharsis reduces the possibility of overt aggressive behaviour in its harmful form. Studies have shown that non-harmful behaviours, such as going for vigorous sports, aggressing at the photograph of an enemy or shouting in foul language in an empty room, that are a substitute to the actual aggressive behaviour, have proved to reduce anger and aggression. However, such effects have been found to be only temporary and when the person is placed in the actual social setting, the aggressive behaviour may recover again. Furthermore, contrary to the belief that safer aggressive acts such as watching televised violence, attacking an inanimate object or verbal aggression may reduce the chances of aggressive behaviour, studies have shown that aggression may actually increase due to involvement in minor aggressive behaviours by reducing the inhibition for such behaviours.

### **c) Cognitive strategies**

Cognitive strategies to reduce aggression function on the argument that intervention at the level of processing of aggressive thoughts can be helpful in breaking of cycle that promotes aggressive tendencies and behaviours.

*Apology* is one of the most common and simple strategy to reduce aggression. When an aggressive behaviour is followed by an apology, the aggressive behaviour is attributed as an unintentional act. However, effectiveness of apology in reducing the likelihood of aggression depends on its genuineness.

Aggression has been believed as an adaptive behaviour in primitive societies.

However, cooperation and collaboration are more required in today's developed and civilised societies that require restraining aggressive behaviours. Therefore, self-regulation and self-control of one's own behaviour is a requisite for maintenance of social order and growth and development of all people in the society. However, processes like self-regulation and self-control require significant amount of cognitive resources that are less available in a state of anger and aggression.

Concept of cognitive deficit assumes that a person's cognitive resources available to process information regarding the consequences of aggressive behaviour are reduced when he or she is extremely angry. In order to avoid such situation while visiting a potentially irritating setting, pre-attribution of others' aggressive behaviour as his or her unique way of communication, rather than malicious intentions, may significantly reduce the probability of aggression. Similar to the effect of the pre-attribution to unintentional causes, preventing oneself from ruminating or thinking repeatedly about previous or imagined irritating behaviour of others may help avoid cognitive deficit. For example, reading articles of one's interest or watching pleasant or comedy films may check ruminations and help the person to regain control over cognitive processes.

### **2.3.6. Bullying behaviour**

Think about some specific, but very common behaviours, such as using very foul language about someone either in person or in their absence, teasing someone, making rude gestures, spreading rumours about someone, hurting someone physically, excluding someone from a group, etc. All these are examples of bullying, a behaviour that is quite similar to aggression.

Olweus (1999) has defined bullying as "*a form of behaviour in which one person repeatedly assaults one or more others who have little or no power to retaliate*". Bullying behaviour can be expressed in several forms, such as verbal, physical, psychological or social. Although usually bullying is thought as a direct and interpersonal behaviour, in the age of virtually connected world it can happen online also.

Moreover, it can be targeted either at one person or at a group of people. Primarily, bullying behaviour is believed more common among children and teenagers in the school contexts. However, it is also found in other contexts, such as home environment, offices, prisons, informal social groups, etc.

#### **a) Motives behind bullying**

Despite incessant efforts of the authorities to control or reduce bullying behaviours in the most vulnerable environments like schools and prisons, this behaviour is still very common, and people often complain about such victimisation.

Roland (2002) has attempted to explain the causes behind bullying behaviour. Primarily, he suggested that there are two key motives behind bullying behaviour: *desire to exercise power over others and desire to be part of a powerful (bully) group*. He argued that both of these motives lead a person to a perceived enhanced social status. The research findings further suggested that girls had an additional motive that led them to engage in bullying behaviour. He found that the *girls with higher tendency to be unhappy* or depressed were more inclined to engage in bullying behaviour. The researchers argued that being engaged in bullying behaviour enhances the perceived social status and makes the bullies feel better and happier; leading to reduced tendency to feel unhappy or depressed.

### **b) Steps to reduce bullying behaviour**

Bullying may affect the victims in many ways. Any such constant victimisation brings about some relatively permanent changes in the victim's personality, such as low self-esteem, social phobia, generalised anxiety or even depression. In many extreme cases, where the victim is not able to find any way to get rid of this embarrassing situation, he or she even commits suicide. Looking at such distressing effects of bullying behaviour on the victims, many steps have been suggested to reduce it in schools:

- We should accept that bullying is a very common phenomenon with very uncommon and devastating effects.
- It must be treated as a serious problem by the authorities involved in the specific settings, such as teachers, parents, students, prisoners, wardens, guards, colleagues, supervisors, etc.
- School authorities should not only pay adequate attention to it, but also unanimously and decisively take action against it.
- The potential victims should be regularly made aware about the institutional measures that counter bullying behaviours and provide protection to the victims.
- Appropriate and prompt punitive actions against bullying behaviours can help in controlling such behaviours to a great extent.



### **Application activity 2.3**

**Question 1:** Explain how aggressive behaviours are acquired from sociological point of view.

**Question 2:** Discuss the role of mass media in perpetrating aggressive behaviour.

## 2.4. Aggression: Personal and cultural influence on aggression

### Learning Activity 2.4



**Question 1:** Discuss different causes of aggression among our societies.

**Question 2:** Why do people from poor socio-economic background tend to be aggressive?

### 2.4.1. Introduction

The occurrence of aggression is still another example of the interaction between person variables and situation variables. Although the social situation is extremely important, it does not influence everyone equally—not all people become aggressive when they view violence. You may be able to watch a lot of violent television and play a lot of violent video games without ever being aggressive yourself. On the other hand, other people may not be so lucky—remember that, on average, watching violence does increase aggression. Just as we may know some people who smoked cigarettes all their lives but never got lung cancer, I would still not recommend that anyone start smoking. The problem is that we don't know if we are going to be affected until it is too late. Let's consider in this section the personality variables that are known to relate to aggression and how these variables may interact with the influence of the social situation.

### 2.4.2. Individual differences in aggression

Given what we know about the tendency toward self-enhancement and a desire for status, you will not be surprised to learn that there is a universal tendency for men to be more violent than women (Archer & Coyne, 2005; Crick & Nelson, 2002). In comparison to women and girls, who use more nonphysical aggression such as shouting, insulting, spreading rumours, and excluding others from activities, men and boys prefer more physical and violent aggression—behaviours such as hitting, pushing, tripping, and kicking (Österman et al., 1998).

People also differ in their general attitudes toward the appropriateness of using violence. Some people are simply more likely to believe in the value of using aggression as a means of solving problems than are others. For many people, violence is a perfectly acceptable method of dealing with interpersonal conflict, and these people are more aggressive (Anderson, 1997; Dill, Anderson, & Deuser, 1997).

The social situation that surrounds people also helps determine their beliefs about aggression. Members of youth gangs find violence to be acceptable and normal (Baumeister, Smart, & Boden, 1996), and membership in the gang reinforces these beliefs. For these individuals, the important goals are to be respected and feared, and engaging in violence is an accepted means to this end (Horowitz & Schwartz, 1974).

Perhaps you believe that people with low self-esteem would be more aggressive than those with high self-esteem. In fact, the opposite is true. Research has found that individuals with high self-esteem are more prone to anger and are highly aggressive when their high self-image is threatened (Kernis, Brockner, & Frankel, 1989; Baumeister et al., 1996). For instance, classroom bullies are those boys who always want to be the center of attention, who think a lot of themselves, and who cannot take criticism (Salmivalli & Nieminen, 2002). It appears that these people are highly motivated to protect their inflated self-concepts and react with anger and aggression when it is threatened.

The experimental studies were conducted and demonstrated that participants in a low status condition were more aggressive than were participants in a high-status condition. Compared with a medium-SES condition, participants of low subjective SES were more aggressive rather than participants of high subjective SES being less aggressive.

Moreover, low SES increased aggressive behaviour toward targets that were the source for participants' experience of disadvantage but also toward neutral targets. Sequential mediation analyses suggest that the experience of disadvantage underlies the effect of subjective SES on aggressive affect, whereas aggressive affect was the proximal determinant of aggressive behavior.

### **2.4.3. Gender differences in aggression**

Given what we know about the tendency toward self-enhancement and a desire for status, you will not be surprised to learn that there is a universal tendency for men to be more violent than women (Archer & Coyne, 2005; Crick & Nelson, 2002). In comparison to women and girls, who use more nonphysical aggression such as shouting, insulting, spreading rumors, and excluding others from activities, men and boys prefer more physical and violent aggression—behaviors such as hitting, pushing, tripping, and kicking (Österman et al., 1998).

Strong gender differences in aggression have been found in virtually every culture that has been studied. Worldwide, about 99% of rapes are committed by men, as are about 90% of robberies, assaults, and murders (Graham & Wells, 2001).

Among children, boys show higher rates of physical aggression than girls do (Loeber & Hay, 1997), and even infants differ, such that infant boys tend to show more anger and poorer emotional regulation in comparison to infant girls. These findings will probably not surprise you because aggression, as we have seen, is due in large part to desires to gain status in the eyes of others, and (on average) men are more concerned about this than are women.

Gender differences in violent aggression are caused in part by hormones. Testosterone, which occurs at higher levels in boys and men, plays a significant role in aggression, and this is in part responsible for these differences. And the observed gender differences in aggression are almost certainly due, in part, to evolutionary factors. During human evolution, women primarily stayed near the home, taking care of children and cooking, whereas men engaged in more aggressive behaviours, such as defence, hunting, and fighting. Thus, men probably learned to aggress, in part, because successfully fulfilling their duties required them to be aggressive. In addition, there is an evolutionary tendency for males to be more competitive with each other in order to gain status.

Studies on rats have shown that male rats react to the stressful conditions either by fighting or by running away from the situation, commonly termed as fight or flight response. Contrariwise, female rats react to the similar situations by nurturing others and by getting engaged in social relations, termed as tend and befriend response (Taylor et al., 2000). Similar findings have been reported by various surveys conducted on human population (Steffensmeier & Allan, 1996) showing that in almost all societies gender differences in aggression exist with *males being physically and verbally more aggressive than the females*. Presumably, across the societies, females are intensely socialised to resort to more indirect forms of aggression and to be less expressive in direct physical and verbal aggression.

#### **2.4.4. Age and aggression**

Despite of general belief that children do not involve in violent actions and aggressive behaviours as much as the adults do, the relationship between age and aggression is not that much simple. Arguably, due to *lack of social skills younger children and adolescents largely depend on physical aggression to settle their disputes* and to get their needs fulfilled. However, as the children grow up, the socialisation process teaches them other mature ways to resolve their issues and hence, they progressively learn to resist their aggression in variety of social interactions.

### 2.4.5. Cultural influences on aggression

Cross-cultural comparisons demonstrate that intergroup aggression increases with the complexity of social organisation with the hierarchical social structures of chiefdoms, kingdoms, and states exhibiting far more warfare than relatively egalitarian bands and tribal societies. Additionally, societies are not static; they can become either more aggressive or more peaceful over time. A culturally comparative view indicates that the causes of aggression are multifaceted- including influence from such sources as learned values, socialisation, social organisation, economics, and ecology, gender, and natural, and sexual selection. Moreover, a study of peaceful and non-warring societies suggests ways to reduce aggression within and among social groups- for instance by restructuring institutions, promoting norms and values favouring peace over aggression, and socializing the young toward peaceful behaviour (Fry, 2012) .



#### Application activity 2.3

**Question 1:** What do societies do to reduce aggression with social groups?

## 2.5. End Unit Assessment



### End unit assessment

**Question 1:** Explain strategies that should be used to reduce aggression among the people.

**Question 2:** How does age and gender influence aggressive behaviour?

**Question 3:** Answer by T/F:

1. Women are more warmth than men and outgoing.
2. Women are more solitary and individualistic (self-reliant) than men.
3. Men are more organized and self-disciplined (Perfectionism) than women.
4. Girls are more suspicious and sceptical (Vigilance) than boys.
5. Women have been found to score higher than men on Neuroticism.
6. Men score higher than women on Assertiveness and Excitement Seeking
7. Men are more dutiful (Rule-Consciousness) than women.
8. All acts of aggression are considered instances of violence.
9. Testosterone is the only biological factor linked to human aggression.
10. Alcohol myopia is being self-focused and ignoring the social situation.

# Unit 3

## THEORIES OF PERSONALITY



**Key unit competence:** Assess different views of psychologists related to personality.



### Introductory activity

Paul, Peter and Patty are three students from the same secondary school. Paul is a reserved, non-talkative, honest, peaceful, but over-controlled student. He doesn't like cheating on exams. He is always afraid of having a girlfriend, as his father explained to him that getting into a friendly relationship is not good for adolescents. Based on the teachings of the Bible, his mother always reminds him of the positive aspects of praying to God and having good discipline. He spends so much time praying and worshipping God that he forgets to review the lessons taught in class.

Peter is the exact opposite of Paul. He is irritable, impulsive, not very intelligent. He doesn't like to work hard and doesn't get excellent grades in school. He is always satisfied with average grades. His behaviour is questionable as he is in love with different girls. Cheating on women lovers is not a problem for him. He always cheats on exams and has never been caught. He always thinks of satisfying his physical pleasures without considering the consequences of his actions.

For her part, Patty is sociable, talkative, friendly and sensible. She always balances between religious activities and schoolwork. Getting your needs met is not a problem as long as it is done in the right way. She would like to have a boyfriend but refuses as she thinks it will not be good for her studies. She will wait until she is mature and have a fiancé. She works hard in class to get good grades in the right way.

#### Question:

- From this scenario and from a personality point of view, how can you judge the behaviour of the three students?
- Do you recognize yourself among the three students? Explain.

## Theories of personality concentrate on:

- Specific traits (honesty, shyness) and how combination of traits can be measured and described.
- Factors that integrate personality (the concept of self).
- Internal feelings (anxiety, conflict, self-fulfilment)

## There are four major theories of personality:

- a. Psychoanalytic theory
- b. Trait and type theories
- c. Humanistic theory
- d. Social cognitive theory

## 3.1. Psychoanalytic theories of personality

### Learning Activity 3.1



In a family, Romeo and Angelo are two children. They are 8 and 4 years old respectively. Romeo is reserved, polite and dislikes disturbing visitors. Angelo is very noisy, sometimes aggressive, always actively moving in different corners. At night, the two boys must sleep in their room, but Angelo always doesn't accept being separated from his mother. Romeo has no problem sleeping alone as he said he is mature enough to sleep in his own room.

There is hatred between Angelo and his father because parents sometimes use punitive measures to prevent Angelo from sleeping with his mother. When da dis at home, Angelo misses the opportunity to spend the night with mom.

Late at night, parents hear Angelo crying and claiming to be sleeping with his mother. When dad has gone to work, Angelo is happy to have the opportunity to stay at mom's room. Romeo always laughs at Angelo for his behaviour.

1. Comment on the behaviour of Angelo.
2. Comment on the behaviour of Romeo.
3. Do you think Angelo exaggerates in his behaviour?
4. Why do you think there's a feeling of hate between Angelo and Daddy?
5. Did you experience the same situation as a child? Explain.

Sigmund Freud (1856-1939) was known as the founder of psychoanalytic theory and his early students (Carl Gustav Jung and Alfred Adler) are among the main figures in psychoanalytic theory. In their opinion, development is beyond consciousness. Because they believed that children are often not aware of the motives and reasons for their behaviour and above all their mental activities. They valued early experiences with parents, which have a profound impact on people's development.

Freud's idea of personality development is embedded in the principle of psychological determinism. This indicates that all human behaviour is caused by psychological factors that operate unconsciously.

### **3.1.1 Freud and the mind**

According to Sigmund Freud, there are three levels of the mind: conscious, preconscious and unconscious. According to Freud, the conscious mind is aware of present perceptions, memories, thoughts, and feelings. It exists as the tip of the iceberg.

Beneath this awareness form (conscious mind), a preconscious carries the available memory. From this pre-conscious mind, a person can recall memories into the conscious mind. There is no argument about the two layers of the mind. Freud's perception suggested that these two layers are only the smallest parts of the mind.

The larger part is the unconscious mind. All the things that are not readily available on a conscious level, like our drives or instincts, memories and emotions associated with trauma. Like an iceberg, this part of the mind plays an important role in personality. It plays out as a repository of primitive desires and impulses. These are mediated by the preconscious. Freud's psychoanalytic theory emphasizes the importance of the unconscious and largely determines people's behaviour (Sibi, 2020).

### **3.1.2 Freud's Model of the Structure of Personality**

According to Freud, three important conceptualized parts of the human personality are the id, the ego, and the superego. They are not entirely separate parts. They are not physical sections of the brain; instead, they are names for psychological forces and hypothetical concepts that Freud created to explain his theory. The existence of these structures is inferred from the behaviour of people in their lives. The 3 parts play together harmoniously to create a well fitted individual.

## **The Id**

The id is present at birth and is the most primitive and illogical part of the personality. It mainly deals with basic biological drives, instincts and reflexes. It is completely unconscious and has no contact with objective reality (KIE, 2008). With the id, the goal setting is not realistic. Based on the pleasure principle, it works at the unconscious level and its primary goal is to maximize physical pleasure and minimize pain or reduce tension or anxiety. The id is the reservoir of psychic energy and the storehouse of biological urges arising from our needs for food, water, warmth, sexual gratification, pain avoidance, and so on. The id is like a demanding, selfish child and has no way of determining which meanness (strategy) is safe and which is dangerous.

The id consists of two types of biological instincts: Eros and Thanatos. The life instinct, Eros, helps the person survive in the world and directs life-sustaining activities such as breathing, eating, and sex in the individual. Life instincts generate energy known as libido. Death Instincts, Thanatos are a set of destructive forces visible in all humans. Sometimes this energy is directed towards others in the form of aggression or violence. Freud believed that Eros is stronger than Thanatos. It always helps people survive.

## **The ego**

The ego is an individual's sense of self. It begins to develop in the first year of life. The purpose of the ego is to satisfy the needs of the id in a very safe and socially acceptable way. The ego works in both the conscious and the unconscious mind. In contrast to the id, it follows the reality principle. It controls and judges the actions or demands of the id. It designs behaviours that correspond to the demands of the superego (social norms, values and ideals). It mediates between the demands of the id and the realities of the world. The ego follows the rules of adult thinking characterized by logic, time orientation and the distinction between reality and unreality.

## **The superego**

The superego arises when the child is between 5 and 7 years old. It is the moral branch of personality. It develops throughout childhood. It represents the ideals and moral standards of society as passed on to the child by their parents in the process of socialization. Through the socialization process, the child learns all the dos and don'ts. Like the id, the superego pays no attention to reality, commanding that the biological urges should be stopped, and pleasure deferred according to society's ideals and morals. It distinguishes between right and wrong, good and bad. It is often referred to as an individual's conscience. It works according to moral principles and the ideals of society.

The superego has two main functions based on reinforcement processes. These are:

- a. For good behaviour - The superego rewards  
Consequence - feeling of pride and self-esteem.
- b. For bad behaviour - The superego uses punishment.  
Consequence - feeling of guilt and inferiority.

According to Freud, the superego is a harsh and punitive disciplinarian. It wants the person to be perfect. It does not take into account individual abilities and circumstances in the environment.

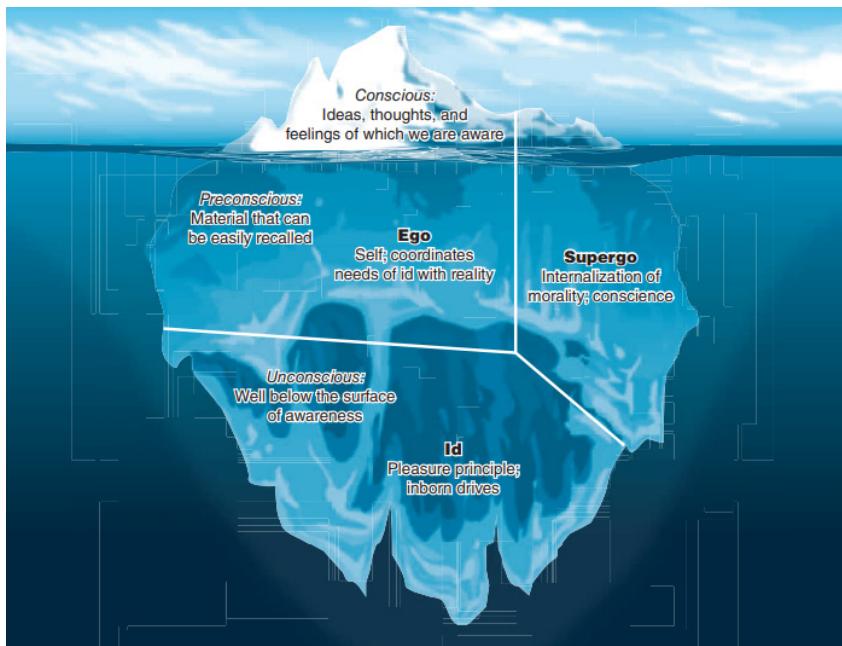


Figure 2: Illustration of the three personality structures

Source: Cocioppo & Freberg (2013, p. 575)

Integration of the three personality structures

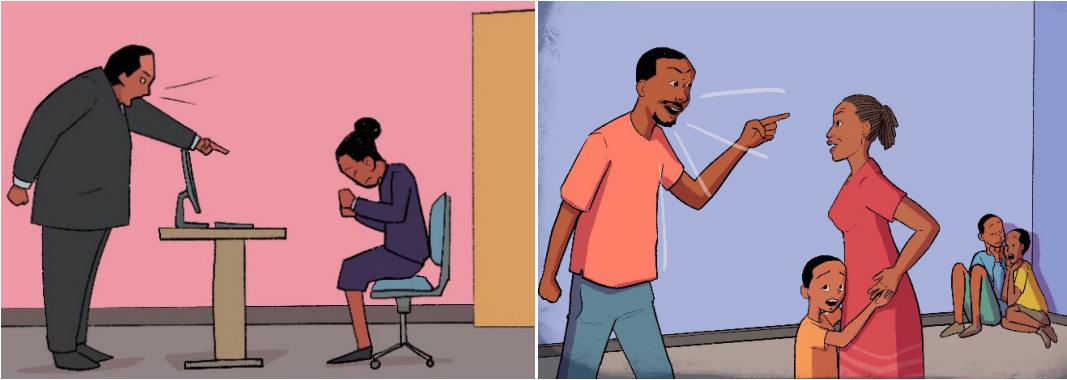
Ego → executive agency (highest) structure in a person → mediates to satisfy the constant demands of id → but bound by the constraints of reality and moderate the ideals

The following hypothetical example illustrates how the three personality structures operate in real life situation.

A six-year-old child Mucyo spots his favourite candy in a supermarket.

- a. The id shouts - "I want it now! Take it!"
- b. The super ego - "Thou shall not steal."
- c. The ego - "I could ask my father Bahizi to buy it for me, but he might say no."

### 3.1.3 Anxiety and defense mechanisms



Inner-psychic conflicts are inevitable in every human being, mostly due to sexual and aggressive impulses and tensions. Usually (or maybe hopefully) these conflicts will resolve themselves in a short time; however, sometimes this is not the case. At times, our internal conflicts can last for a long time and potentially cause us great harm. Fear can often wear us down and should not be underestimated.

When the ego loses its energy to resolve the divergent demands of the id, fear is signalled. Fear, a feeling of tension that hinders our daily functioning, tells the ego that something needs to be done to resolve the conflict and protect the personality from danger. The ego therefore uses a defense mechanism, a mental strategy, to block the harmful forces while reducing fear. It protects the individual from overwhelming fear, superego punishment, and other unpleasant experiences.

Freud defines 9 primary defense mechanisms: repression, sublimation, rationalization, displacement, reaction formation, projection, denial, regression, and identification. According to Freud, each of these mechanisms helps us channel potentially self-destructive or painful psychic energy into more constructive or controllable behaviour. However, Freud noted that every mechanism has its limitations. If persons constantly employ a particular defense mechanism, they risk harming themselves. For more information, other defense mechanisms such as acting out, compensation, and withdrawal have been added in the table below.

Table 4: Freud's defense mechanisms

Defense mechanism	Definition	Example
Repression	<p>Repression is defined by "<i>Keeping distressing thoughts and feelings buried in the unconscious.</i>"</p> <p>Anxiety-producing information is returned to the unconscious mind.</p>	<p>Forgetting sexual abuse from your childhood due to the trauma and anxiety.</p> <p>A person "forgets" about an embarrassing incident from middle school.</p>
Sublimation	<p>Unacceptable urges are redirected into more prosocial channels.</p> <p>With sublimation socially unacceptable impulses or idealizations are consciously transformed into socially acceptable actions or behaviour".</p>	<p>(1) Aggressive youth take martial arts classes. (2) Sublimating your aggressive impulses toward a career as a boxer; (3) Becoming a surgeon because of your desire to cut; lifting weights to release "pent up" energy.</p>
Rationalization	<p><i>Creating false but plausible excuses to justify unacceptable behaviour.</i></p> <p>Excuses are made for anxiety-producing behaviour.</p>	<p>An athlete using performance enhancing drugs says that "everybody is doing it." (2) A student stealing money from a wealthy friend of his, telling himself "Well he is rich; he can afford to lose it."</p>
Displacement	<p><i>Diverting emotional feelings (usually anger) from their original source to a substitute target.</i>"</p> <p>Negative emotions are redirected from the real source to another target.</p>	<p>(1) In a family, the father getting mad at the mother. The mother then takes her anger out on her son, the son in turn yells at his little sister, the little sister kicks the dog, and the dog bites the cat. (2) You yell at your roommate because your boss yelled at you at work.</p>

<p>Reaction formation</p>	<p>It is defined as “<i>Behaving in a way that is exactly the opposite of one’s true feelings.</i>”</p> <p>Behaviour is opposite to your true feelings.</p>	<p>(1) A woman who is very angry with her boss and would like to quit her job may instead be overly kind and generous to her boss and express a desire to work there forever. Unable to express the negative emotions of anger and dissatisfaction with her work, she instead becomes overly friendly in publicly demonstrating her lack of anger and dissatisfaction.</p> <p>(2) A guilty partner who is planning to end a relationship sends flowers.</p>
<p>Projection</p>	<p>Projection is the <i>misattribution of a person’s undesired thoughts, feelings or impulses onto another person who does not have those thoughts, feelings or impulses.</i></p> <p>Anxiety-producing characteristics or behaviours of the self are attributed to others.</p>	<p>A person who cheats on a partner checks his or her partner’s cell phone and e-mail for possible cheating.</p>
<p>Denial</p>	<p>Denial is “<i>the refusal to accept reality or fact, acting as if a painful event, thought or feeling did not exist</i>”.</p>	<p>(1) A person who is a functioning alcoholic will often simply deny they have a drinking problem, pointing to how well they function in their job and relationships.</p> <p>(2) Denying that your physician’s diagnosis of cancer is correct and seeking a second opinion.</p>

Regression	<p>Reverting to immature behaviour to relieve anxiety.</p> <p>Regression is “<i>the reversion to an earlier stage of development in the face of unacceptable thoughts or impulses</i>”.</p>	<p>(1) An adolescent who is overwhelmed with fear, anger and growing sexual impulses might become clingy and start exhibiting earlier childhood behaviours he has long since overcome, such as bedwetting.</p> <p>(2) Sitting in a corner and crying after hearing bad news.</p>
Identification	<p>Resolving anxiety by taking on the characteristics of others.</p> <p>It happens when an individual takes on the features of another person and makes them a part of his/her own personality so as to increase the feeling of worthiness.</p>	<p>(1) A small child reassures a teddy bear about fear of the dark.</p> <p>(2) Aping the way a person speaks because it is “better”.</p>
Compensation	<p>Compensation is a process of psychologically counterbalancing perceived weaknesses by emphasizing strength in other arenas.</p>	<p>A learner who performs poorly in the class work may work extra hard and produce excellent results in a sporting activity.</p>
Withdrawal	<p>Some people tend to withdraw from the situation which causes them difficult. They do everything in their power to keep away from psychological demanding situations. Failure and criticism make them timid and insecure.</p>	<p>For example, a learner who is afraid of achieving success in social relationships may shun the company of other students. He may remain at home by himself and may refuse to participate in sports or social gatherings</p>

**Source:** Information from Cacioppo & Freberg (2013), Grohol (2016), REB (2020)

### 3.1.4 Psychosexual stages and personality development



Freud's most controversial argument concerns personality formation (KIE, 2008). Freudian psychosexual stages were developed by Freud and his followers, including his daughter Anna Freud, who worked directly with children. Freud believed that humans go through 5 stages of psychosexual development (oral, anal, phallic, latency and genital) and that humans have a part of their body that gives more pleasure than the rest of the body at each stage of development (i.e. mouth, anus and finally the genitals). He promotes the concept of erogenous zones, which refer to the parts of the body that can provide intense pleasure at any stage of development. However, when an excessive amount of energy or dissipation of energy is attached to a particular stage, fixation is likely to occur. Freud believed that adult personality is shaped by how the conflicts between early id drives and the demands imposed by society, such as weaning, toilet training, prohibitions on masturbation, are resolved at each of the psychosexual stages.

**Fixation:** The term fixation in Freudian theory refers to the failure to mature beyond a certain stage of psychosexual development. Emotional problems in adults can be traced back to specific disorders during the four stages of psychosexual development. When the individual is unable to resolve the conflicting demands of the id impulses and the limitations of the superego, development is blocked at a certain level. It's called fixation. The stronger the fixation on a particular stage, the less mental energy a person has for mature social and emotional relationships with their environment.

The five stages given by Freud are hypothetical and these include (Hansell, Ehrlich, Katz & Minter, 2008):

### **1. The Oral stage (Birth-18 months)**

It is the first stage of development that occurs in a baby's first 18 months of life. The erogenous zone is the mouth. At this stage, the child gets pleasure especially around the mouth. Therefore, oral activities such as chewing, sucking, and biting provide sexual satisfaction and nourishment to an infant, thereby reducing tension. It's better to note that stopping breastfeeding early can lead to frustration and over-gratification can lead to high expectations on the part of an infant who tends to get everything in life. During this phase, sexual pleasure is centered in the mouth. Sucking is an important activity at this stage, not only to get food to satisfy hunger, but also a source of intense pleasure for the child. That's why babies suck, lick, bite, and chew on anything they can get their hands on.

Fixation at the oral stage can occur for the following reasons:

- a) When babies repeatedly experience anxiety over whether food will be given or not given.
- b) When they come to learn that they are totally dependent on others.

### **Consequences**

- Passive, over dependent, unenterprising adult.
- A child who experienced strong oral fixation, due to the birth of a sibling may revert to thumb sucking and exaggerated dependency. It is a form of regression.

### **2. The anal stage (18 months–3 years)**

This is the second stage of development, occurring between the ages of 1.5 and 3 years when children begin to develop voluntary control over bowel movements. The erogenous zone at this stage is the anus. During this phase, the child's greatest pleasure involves the anus, or passing faeces from the bowels. Holding and expelling faeces gives the child great sensual pleasure. In this phase, the toilet training takes place.

At this stage, toilet training requirements are imposed by the parents. According to Freud, toilet training is a crucial event because it is the first major conflict between the child's id impulses and the rules of society. Fixation can occur at this stage if there are conflicts between the child and the caregivers. Fixation at this stage may occur due to rigorous and punitive toilet training.

## **Consequences**

- The child may resist completely the urge to defecate in a free and enjoyable manner.
- May result in extreme orderliness during adulthood.
- May result in excessive neatness during adulthood.

### **3. The phallic stage (3–6 years)**

It is the third stage of development that occurs when the child is between 3 and 6 years old. Erogenous zone: genitals. Pleasure focuses on masturbation (self-manipulation) of the genitals. It is the time when the Oedipal and Electra conflicts occur. According to Freud, at this stage a child fantasizes about sexual pleasure with the opposite-sex parent and tends to dislike the same-sex parent. Freud calls this conflict in boys the Oedipus complex. This happens when a boy seeks sexual pleasure by bonding with his mother but hates his father and sees him as a rival. On the other hand, Freud referred to girls' feeling of sexual pleasure towards their fathers as the Elektra complex. It takes place when a girl seeks sexual pleasure by bonding with her father but hates the mother and sees her as a rival.

#### **Resolution of the Oedipal conflict**

The boy or girl realizes that biologically he or she can never possess the characteristics of the parent of the opposite sex. Through identification, the boy or girl attempts to adopt the attitudes, behaviours, and moral values of the same-sex parent.

### **4. The Latency stage (6 years–puberty)**

The resolution of the Oedipal complex involves a latency period which is the fourth stage of development that occurs between the ages of 6 and puberty (approximately 11 years old). During this stage, the sexual and aggressive urges that used to provoke crises are temporarily dormant. This is the stage where sexual feelings remain unconscious and repressed in latency. There is no sexual zone for this condition. This does not mean that the child's life is completely conflict-free at this point. For example, the birth of a sibling can cause intense jealousy. At this point, a child becomes motivated to participate in social skills and intellectual skills such as schoolwork and role play based on their gender.

### **5. The genital stage (puberty–adulthood)**

The genital stage is the final stage of development, occurring from puberty onwards. This is the time when sexual urges re-emerge as a source of pleasure but are now being redirected to someone outside of the family. During puberty, sexual energy gets high.

Once again, Oedipal feelings threaten to invade consciousness, and now the young person is big enough to translate them into reality. The genitals are considered as erogenous zone during this stage.

Freud said that the great task of the individual from puberty onwards is to break free from parents. For the son, this means breaking the bond with his mother and finding a wife of his own. The boy must also settle his rivalry with his father and break free from his father’s domination over him. For the daughter, the tasks are the same. She too has to separate from her parents and build a life of her own. However, Freud noted that independence is never easy. Over the years we have developed a strong dependence on our parents, and it is painful to separate from them emotionally.

*Table 5: Summary of Freud's psychosexual stages of development*

Stage	Approximate ages	Main characteristics
Oral stage	Birth to 1 year	Pleasure obtained by sucking
Anal stage	1 to 3 years	Conflict between child's ability to eliminate wastes at will versus societal expectations of toilet training
Phallic stage	3 to 6 years	Oedipus and Electra complexes lead to identification with same-sex parent
Latency stage	6 to 12 years	Focus on internalization of society's rules
Genital stage	12 years and above	Focus on adult sexual interests and behaviours

**Source:** Cacioppo & Freberg (2013, p. 577)



### Application activity 3.1

1. Summarize the view of psychoanalytic theory of personality.
2. According to Freud's ideas about the three-part personality structure, the-----operates on the reality principle and tries to balance demands in way that produces long-term pleasure rather than pain; the-----operates on the pleasure principle and seeks immediate gratification; and the -----represents the voice of our internalized ideals (our conscience).
3. Freud believed that our defense mechanisms operate-----  
---(consciously/unconsciously) -----and defend us against-----
4. Complete the following table accordingly:

Defense mechanism	Definition	Example
Rationalization		
	The refusal to accept reality or fact, acting as if a painful event, thought or feeling did not exist".	
		A learner who performs poorly in the class work may work extra hard and produce excellent results in a sporting activity.
Regression		
		A person who cheats on a partner checks his or her partner's cell phone and e-mail for possible cheating.

5. Explain: Oedipus Complex and Fixation
6. Enumerate the psychosexual stages of personality development and their corresponding ages.

## 3.2. Neo-Freudian-psychoanalytic theory

### Learning Activity 3.2



1. Think of some Rwandan proverbs that show how people's behaviour is acquired, shaped or changed through interaction with society.
2. Using your family as an example, explain how your behaviour was influenced by your family members.
3. Using Rwandan culture, explain at least 2 cultural factors that shape our personality.

As the father of psychoanalysis, Freud's intellectual qualities really did attract many scholars. Many of his followers accepted his views, but later disagreed with their mentor on certain assumptions. They became known as Neo-Freudians. They contradicted Freud's idea that the personality is fully formed in the first seven years of life, i.e., in the psychosexual stages of development. They contradicted instinctive influences on personality. Neo-Freudians emphasized social influences on personality. These differences of opinion led to the rupture between Freud and his followers. The main scholars who came to be known as Neo-Freudians are Carl Gustav Jung, Alfred Adler, and Karen Horney.

### 3.2.1 Carl Gustav Jung (1875-1961)

Carl Gustav Jung was a Swiss psychiatrist and founder of analytical psychology. A prolific author, he made contributions to diverse fields such as psychiatry, psychology, anthropology, literature, philosophy, religious studies, and parapsychology. He is also well known for the cultural implications of his work and its influence on contemporary spirituality, art, and popular media.

But because of theoretical differences with Freud (he did not share the same view as his master regarding the importance of the unconscious in personality formation); Jung developed his own theory and called it Analytical Psychology. The first point on which Jung disagreed with Freud was the role of sex. Jung expanded Freud's definition of libido by redefining it as a more general psychic energy that includes, but is not limited to, sex. The second major issue concerned the direction of the forces affecting personality. While Freud viewed people as prisoners or victims of past events, Jung argued that we are also shaped by our future as well as our past. We are influenced not only by what happened to us as children, but also by what we aspire to do in the future.

The third key difference revolved around the unconscious. Rather than downplaying the role of the unconscious, as did the other neo psychoanalytic dissidents we are discussing, Jung placed an even greater emphasis on it than Freud. He delved deeper into the unconscious and added a new dimension: the inherited experiences of human and pre-human species. Although Freud recognized this phylogenetic aspect of personality (the influence of inherited primal experiences), Jung made it the core of his personality system.

Jung suggested that there is another important part of personality called the collective unconscious that Freud overlooked. Jung believed that the collective unconscious is made up of primitive images called archetypes. These are inherited images that shape our perception of the outside world. These archetypes that humans share include mother, father, sun, moon, death, hero, god, etc. Jung's theory includes important archetypes which he called animus and anima.

### **The collective unconscious**

Jung viewed the collective unconscious as supporting and surrounding the unconscious, distinguishing it from the personal unconscious of Freudian psychoanalysis. He believed that the concept of the collective unconscious helps explain why similar themes appear in mythologies around the world. He argued that the collective unconscious had a profound impact on the lives of individuals who acted out its symbols and clothed them with meaning through their experiences. The psychotherapeutic practice of analytical psychology revolves around the study of the patient's relationship to the collective unconscious.

### **Anima and Animus**

Anima and animus are personifications of the feminine nature of a man's unconscious and the masculine nature of a woman. The animus is the masculine nature of the woman. This gives the masculine, aggressive aspect of the personality. While men, despite being masculine, possess an anima that is personality with feminine touches of gentleness, passivity and support. These facts drive both men and women to exhibit behaviours that are inconsistent with cultural expectations. Anima symbolizes the unconscious female component of the male psyche while Animus symbolizes the unconscious male component of the female psyche.

### **Jung psychological types**

Jung also gave the concepts of introverts and extroverts. The first category consists of people who are quiet, cautious, keep to themselves and don't reveal their impulses and feelings. While the second category consists of those who are outgoing, talkative and sociable, sharing their feelings and impulses with others. They are friendly and take part in social activities.

### 3.2.2 Alfred Adler's individual psychology (1870-1937)

Alfred Adler contributed the notion of an inferiority complex to psychodynamic thinking. The American Psychological Association (APA) defines an inferiority complex as a basic feeling of inadequacy and insecurity. These feelings can stem from an actual or perceived deficiency in some area of a person's life. This can be a physical or psychological weakness or deficiency.

According to Adler, an inferiority complex or overwhelming feelings of inferiority can lead to overcompensation, usually in the form of seeking appearances of superiority rather than substance. For example, a person might overcompensate for feelings of inferiority towards their peers by buying a fancy, expensive car.

Adler also believed in the importance of social connections and saw childhood development through social development rather than the sexual stages outlined by Freud. Adler pointed out the interconnectedness of humanity and the need to work together for the good of all. He said: The happiness of humanity lies in cooperation, in living as if each individual had made it his mission to contribute to the common good, where the main goal of psychology is to recognize the equality and equality of others.

Adler was also one of the first psychologists to suggest that siblings, along with parents, might have an impact on development, leading to studies of the effects of birth order. An important contribution Adler made to personality psychology was the idea that our birth order shapes our personality. He suggested that older siblings, who were initially the focus of their parents' attention need to share that attention once a new child joins the family, compensate by becoming high achievers. The youngest children could be spoiled, according to Adler, leaving the middle child with the opportunity to minimize the negative dynamics of the youngest and oldest children. Despite the public attention, research has not definitively confirmed Adler's hypotheses about birth order.

#### Three concepts in Adler's individual psychology

##### 1. Striving for superiority

- It's a basic human tendency.
- For Adler, superiority does not necessarily mean power over others or competitive success. It refers to a more general goal of perfection and self-realization. Humans are therefore constantly striving to move upwards.
- In the neurotic or emotionally disturbed individual, this positive force is misdirected. It manifests itself in the pursuit of power, prestige, and other selfish goals. Such individuals exhibit power-oriented behaviour in response to feelings of inadequacy and inferiority.

## 2. Inferiority

- Humans are constantly striving to overcome feelings of inferiority.
  - Inferiority can be physical (organic) or psychological or social.
- i) Organ inferiority: Example-development of acute hearing as compensation for poor vision.
  - ii) Psychological inferiority: Example-a young child's feelings of inadequacy compared with an older sibling might lead him or her to learn new skills.
    - Superiority complex is overestimation and inferiority complex is underestimation of oneself.
    - Realistic self-perception about the strengths and weaknesses is necessary to achieve success, self-improvement and perfection in life.

## 3. Style of life

- Refers to distinctive personality that each of us develop in response to our inferiorities.
- Refers to uniqueness, formed at the age of five that characterizes the person throughout life and becomes the distinguishing feature of the personality.

### 3.2.3 Karen Horney (1885–1952)

Her differences with Freud began when she questioned his psychological portrayal of women. An early feminist, she argued that psychoanalysis focused more on male development than female development. Horney firmly believed that personality development is influenced by social and cultural factors. She challenged Freud's view that differences in behaviour between men and women were due to innate factors such as biological or anatomical differences. Horney's view was that the differences between men and women are based on social factors, not on innate inferiority on the part of women.

Horney believed that every human being has the potential for self-actualization and that the goal of psychoanalysis should be moving toward a healthy self, rather than exploring early childhood patterns of dysfunction. Horney challenged Freud's concept of penis envy with her own concept of womb envy, which denotes men's envy of women's ability to bear and nurse children. She did not believe that men were superior to women. In her view, the fixation of psychic energy is not responsible for psychic disorders but is due to disturbed interpersonal relationships during childhood by the parents. In most cases, parents create feelings of isolation and helplessness in their children, which often impede healthy development. This happens when parents are too dominant, showing indifference or giving too much approval and admiration, or too little of it.

In her view, personality cannot depend solely on biological forces, as Freud suggested. If this were the case, we would not find such large differences from one culture to another (Schultz & Schultz, 2013). Horney, like Adler, placed more emphasis than Freud on social relationships and interactions as essential factors in personality formation. She argued that sex was not the determining factor, as Freud claimed, and she questioned his concepts of the Oedipus complex, libido, and the three-part structure of personality. For Horney, people are not motivated by sexual or aggressive forces, but by the need for safety and love.

### **The childhood need for safety**

Horney agreed in principle with Freud about the importance of early childhood in the formation of adult personality. However, they differed in the peculiarities of personality formation. Horney believed that social forces in childhood, not biological forces, influence personality development. There are neither universal stages of development nor inevitable childhood conflicts. Instead, the social relationship between the child and their parents is the key factor. Horney thought that childhood was dominated by the need for security, by which she meant the need for security and freedom from fear (Horney, 1937). An infant experiences a feeling of security and an absence of fear is decisive in determining the normality of his or her personality development.

Parents can act in a variety of ways to undermine their children's safety, thereby eliciting hostility. These parental behaviours include apparent favouritism towards a sibling, unjust punishment, unpredictable behaviour, broken promises, mockery, humiliation, and isolating the child from peers. Horney suggested that children should know if their parents' love is genuine. False demonstrations and insincere displays of affection do not easily fool children. The child may feel the need to suppress the hostility evoked by parents subverting the behaviour for reasons of helplessness, fear of the parents, need for genuine love, or guilt.

Horney placed great emphasis on the infant's helplessness. However, unlike Adler, she did not believe that all infants necessarily feel helpless, but when these feelings arise, they can lead to neurotic behaviour. Children's sense of helplessness depends on their parents' behaviour. If children are kept in an overly dependent state, their feelings will be one of helplessness. The more anxious children become, the more they will repress their hostility.

### **Neurotic Needs**

Karen Horney listed 10 such needs, which she called neurotic needs because they are irrational solutions to one's problems. The 10 neurotic needs are as follows:

- Affection and approval
- A dominant partner
- Power
- Exploitation
- Prestige
- Admiration
- Achievement or ambition
- Self-sufficiency
- Perfection
- Narrow limits to life

The neurotic needs encompass the four ways we protect ourselves from fear: gaining affection, being submissive, gaining power, and withdrawing encompasses the needs for self-sufficiency, perfection, and narrow limits in life.

*Table 6: Horney's neurotic needs and neurotic trends*

NEEDS	TRENDS
<ul style="list-style-type: none"> <li>- Affection and approval</li> <li>- A dominant partner</li> <li>- Power</li> <li>- Exploitation</li> <li>- Prestige</li> <li>- Admiration</li> <li>- Achievement or ambition</li> <li>- Self-sufficiency</li> <li>- Perfection</li> <li>- Narrow limits to life</li> </ul>	<ul style="list-style-type: none"> <li>Movement toward other people (the compliant personality)</li> <li>Movement against other people (the aggressive personality)</li> <li>Movement away from other people (the detached personality)</li> </ul>

**Source:** Schultz and Schultz (2013, p. 146)

### Three personality types by Karen Horney

Horney suggested three types of personality:

#### The compliant personality

The compliant personality exhibits attitudes and behaviours that reflect a desire to move towards other people: an intense and continuous need for affection and approval, an urge to be loved, wanted, and protected. Compliant personalities demonstrate these needs to everyone, although they typically need a dominant person, such as a friend or spouse, to take charge of their lives and provide protection and guidance.

Compliant personalities manipulate other people, especially their partners, to achieve their goals. In dealing with other people, compliant personalities are forgiving and subordinate their personal desires to those of other people. You are willing to take blame and bow down to others without being assertive, critical, or demanding. They do whatever the situation calls for, as they interpret it, to gain affection, approval, and love.

### **The aggressive personality**

Aggressive personalities act against other people. In her world everyone is hostile; only the strongest and brightest survive. Life is a jungle where superiority, strength and ferocity are the most important virtues. Although their motivation is the same as that of the compliant type, to alleviate underlying fears, aggressive personalities never show fear of rejection. They act tough and domineering and show no consideration for others. To gain the control and superiority that is so important to their lives, they must consistently perform at their best.

By excelling and receiving recognition, they find satisfaction in having their superiority validated by others. Because aggressive personalities are driven to outperform others, they judge everyone by the value they get from the relationship. They make no effort to appease others, but argue, criticize, demand, and do whatever is necessary to gain and maintain superiority and power.

### **The detached personality**

People who are described as detached personalities are driven to distance themselves from other people and maintain an emotional distance. They don't love, hate, or cooperate with others or interfere in any way. To achieve this total detachment, they strive to become independent. If they are to function as detached personalities, they must rely on their own resources, which must be well developed.

Distant personalities have an almost desperate need for privacy. They need to spend as much time alone as possible and it bothers them to even share an experience like listening to music. Their need for independence makes them sensitive to any attempt to influence, coerce, or oblige them. Detached personalities need to avoid all constraints, including schedules, long-term commitments like marriages or mortgages, and sometimes even the pressure of a belt or tie. Detached personalities suppress or deny all feelings towards other people, especially feelings of love and hate. Intimacy would lead to conflict and that must be avoided.



### Application activity 3.2

1. What are the three Neo-Freudians studied in this unit?
2. Complete the table below by writing the proposed concepts under the corresponding psychologists:

**Collective unconscious, inferiority complex, birth order, womb envy, anima, animus, individual psychology, neurotic needs, compliant personality, the aggressive personality.**

Alfred Adler	Karen Horney	Carl Gustav Jung

3. Provide the ideas of disagreement between:
  - a) Jung and Freud
  - b) Adler and Freud
  - c) Horney and Freud
4. Explain the concept of Collective Unconscious in the view of Carl Gustav Jung.
5. Explain the concept of 'inferiority complex'?
6. The concept of womb envy was coined by Karen Horney to challenge the concept of .....which was advanced by Sigmund Freud.
7. Explain the three types of personality according to Karen Horney.

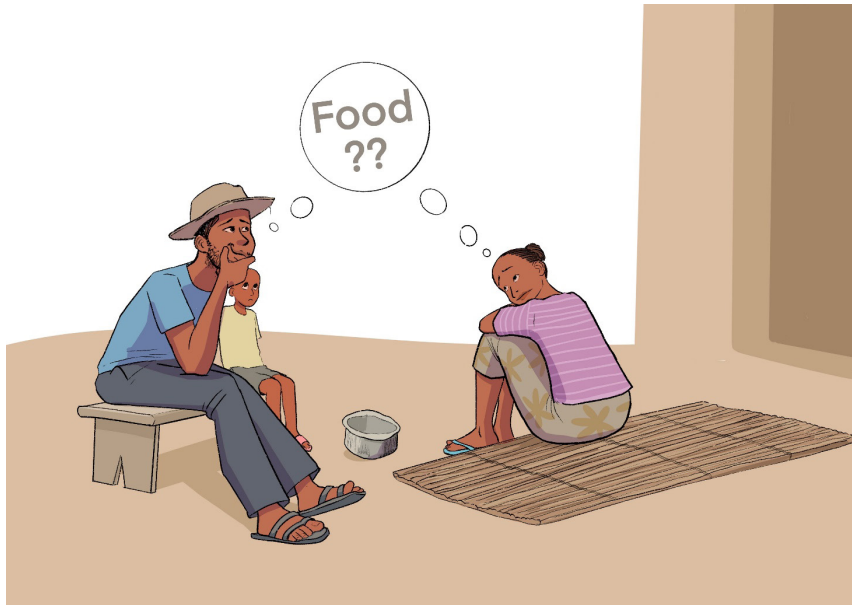
### 3.3. Humanistic theory of personality

#### Learning Activity 3.3



**Taking your family as an example, describe your life by answering these questions:**

1. Do you always struggle to find basic needs in your family? If yes, explain how. If no, explain.
2. Do you have enough security at home and on the way to and from school? What are the elements of insecurity in your location?
3. Can you describe the kind of love you experience at home and at school?
4. What are your aspirations in future time?



Psychoanalysis viewed human as a bundle of animal drives, libidinal forces and unconscious motivations. Humanism, on the other hand, viewed humans as essentially good and striving for self-realization.

Humanistic psychologists criticized Freud and other psychoanalysts for examining only the emotionally disturbed side of human nature. They questioned how we could ever learn about positive human traits and qualities if we restricted our focus to neuroses and psychoses. Instead, humanistic psychologists suggested examining our strengths and virtues; that is, human behaviour at its best, not at its worst. The humanists believed that psychodynamic theories placed too much emphasis on abnormal behaviour. Instead, they advocated studying extraordinary people to see why they were successful.

The humanistic approach to personality is represented here by the works of Abraham Maslow and Carl Rogers. Their theories emphasize human strengths and aspirations, conscious free will, and the fulfilment of human potential. They convey a flattering and optimistic picture of human nature, describing us as active, creative beings interested in growth and self-realization.

### **3.3.1 Abraham Maslow: Needs-Hierarchy Theory**

The humanistic psychology movement is believed to have been founded by its intellectual founder, Abraham Maslow. He opposed psychoanalysis, particularly Freud's approach to personality, as well as behaviourism. Maslow claims that psychologists disregard good human qualities like happiness, contentment, and peace of mind when they only study deviant or emotionally disturbed examples of people.

Maslow claimed that psychologists underestimate human nature when they fail to look at the most resourceful, healthy, and mature people. Maslow consequently concluded that society's best representatives would be evaluated using his theory of personality. His theory is based on studies of creative, autonomous, self-sufficient and fulfilled people rather than case studies of clinical patients. He concluded that everyone is born with the same natural needs that allow them to grow, develop and achieve their full potential.

### **Personality development: The hierarchy of needs**

Maslow (1968, 1970b) proposed a hierarchy of five innate needs that activate and guide human behaviour. They are the physiological, security, belongingness and love, esteem and self-actualization needs (see figure 2). Maslow described these needs as instinct of id, meaning they have a hereditary component. However, these needs can be influenced or overridden by learning, social expectations, and fear of disapproval. Although we are born with these needs, the behaviours we use to meet them are learned and therefore vary from person to person.

The needs are arranged in order from strongest to weakest. Lower needs must be at least partially satisfied before higher needs become influential. For example, hungry people feel no urge to satisfy the higher need for esteem or appreciation. They are concerned with satisfying the physiological need for food, not with gaining approval and appreciation from other people. It is only when people have sufficient food and shelter, and when the rest of the lower needs are satisfied, that they become motivated by needs higher in the hierarchy.



*Figure 3: Hierarchy of human needs by Maslow*

**Source:** Schultz & Schultz (2013, p. 246)

So, we are not driven by all needs at the same time. In general, only one need will dominate our personality. Which it will be depends on which of the others are satisfied. People who are successful in their careers are no longer driven by, or even aware of, their physiological and safety needs. Adequate provision was made for these needs. Successful people are more likely to be motivated by a need for appreciation (esteem) or self-actualization. However, Maslow suggested that the order of these needs can be changed. When an economic recession causes some people to lose their jobs, safety and physiological needs can once again take priority. The ability to pay the mortgage becomes more valuable than popularity with peers or an award from a civic organization.

### **Characteristics of Needs**

Maslow described several characteristics of needs (Schultz & Schultz, 2013).

- The lower the need is in the hierarchy, the greater its strength, potency, and priority. The higher needs are weaker needs.
- Higher needs emerge later in life. Physiological and safety needs arise in infancy. Needs of belonging and appreciation (esteem) arise in adolescence. The need for self-realization only arises in midlife.
- As higher needs are less necessary for actual survival, their gratification can be deferred (postponed). The non-satisfaction of a higher need does not lead to a crisis. Failure to meet a lower need leads to a crisis. For this reason, Maslow called lower needs deficit, or lack, needs; their non-satisfaction creates a deficit or deficiency in the individual.
- Higher needs, while less essential for survival, contribute to survival and growth. Satisfying higher needs leads to improved health and longevity. For this reason, Maslow called higher needs growth or being needs.
- Satisfying higher needs is also psychologically beneficial. Satisfying higher needs leads to contentment, happiness, and fulfilment.
- The satisfaction of higher needs requires better external circumstances (social, economic and political) than the satisfaction of lower needs. For example, the pursuit of self-actualization requires greater freedom of expression and opportunity than the pursuit of security needs.
- A need does not need to be fully satisfied before the next need in the hierarchy becomes important. Maslow proposed a decreasing percentage of satisfaction for each need. As a hypothetical example, he described a person who, in turn, satisfied 85 percent of physiological needs, 70 percent of safety needs, 50 percent of needs for belonging and love, 40 percent of needs for esteem, and 10 percent of needs for self-actualization.

## **Physiological Needs**

These are survival needs and they include needs for food, water, oxygen and sex. If you've ever been swimming and struggling for air underwater, or if you haven't eaten for too long, you may have noticed how trivial the needs for love or appreciation or anything else can be when your body is going through a physiological shortage. As we have already established, a starving person only craves food. But once that need is satisfied, the person is no longer driven by it. The need to direct or control behaviour ceases. Physiological needs have greater personal impact as motivating forces in cultures where basic survival remains an everyday concern. Since a satisfied need no longer serves to motivate behaviour, physiological needs play a minimal role for most of us.

## **Safety Needs**

These include security, order and stability. Maslow believed that safety and security needs are typically important drivers for infants and neurotic adults. Emotionally healthy adults usually have their need for security met, a state that requires stability, security, and freedom from fear and anxiety. In infants and children, the need for security is clearly reflected in their behaviour, because young people react visibly and immediately to any threat to their security. Adults have learned how to inhibit their reactions to dangerous situations.

Maslow pointed out that although most normal adults have security needs met, these needs can still influence behaviour. Many of us prefer the predictable to the unknown. We prefer order to chaos. So we save for the future, buy insurance and choose to stay in a secure job rather than risk a new business. However, the need for security is not as overwhelming a driving force for normal adults as it is for children or neurotics.

## **Belongingness and Love Needs**

Once our physiological and safety needs are somewhat satisfied, we attend to our needs for belongingness and love. These needs can be expressed through a close relationship with a friend, lover, or partner, or through social relationships within a group. In our increasingly mobile society, the need to belong is becoming increasingly difficult to satisfy. Many of us try to meet our need to belong in other ways, such as joining a church, club, or online chat room, signing up for a class, or volunteering with a charity.

## **Esteem Needs**

Once we feel loved and have a sense of belonging, we may be driven by two forms of the need for esteem. We demand esteem and respect from ourselves in the form of self-worth feelings and from other people in the form of status, recognition or social success.

Satisfying the need for self-esteem allows us to feel secure in our strength, worth, and appropriateness, which helps us become more competent and productive in all aspects of our lives. When we lack self-esteem, we feel inferior, helpless, and discouraged, and have little confidence in our ability to handle it.

### **The Self-Actualization Need**

The highest need in Maslow's hierarchy, self-actualization, depends on the maximum realization and fulfilment of our potentials, talents, and abilities. Although a person can meet all other needs in the hierarchy, if he does not achieve self-actualization, he will be restless, frustrated, and dissatisfied. Maslow wrote: "A musician must make music, an artist must paint, a poet must write, in order finally to find peace" (Maslow, 1970b, p. 46).

The process of self-realization can take many forms, but every person, regardless of profession or interests, is able to maximize their personal abilities and achieve the fullest personal development. Self-actualization is not limited to creative and intellectual superstars such as musicians, artists and astrophysicists. What is important is to exploit one's own potential at the highest possible level, whatever the chosen undertaking.

The following conditions are necessary for us to be able to satisfy the need for self-actualization:

- We must be free from the constraints imposed on us by society and by ourselves.
- We must not be distracted by lower-order needs.
- We need to be secure in our self-image and in our relationships with other people; we must be able to love and be loved.
- We need to be realistic about our strengths and weaknesses, virtues and vices.

**NB:** Although Maslow's proposed hierarchy of needs applies to most of us, there can be exceptions. Some people dedicate their lives to an ideal and willingly sacrifice everything for their cause. It is well known that people fast to the death in the service of their faith, thus denying their physiological and security needs.

Religious figures may give up worldly goods to fulfil a vow of poverty, thereby satisfying the need for self-actualization while frustrating lower-order needs. Artists throughout history have compromised health and safety for the sake of their work. A more common inversion in the hierarchy occurs when people place esteem above love, believing that needs for belonging and love can only be satisfied by first feeling confident.

## The Study of self-actualizers

According to Maslow's theory, self-actualizing individuals differ from others in their basic motivation. In his research on emotionally healthy people, Maslow (1970b) discovered some examples of self-actualizers; He estimated that they make up 1 percent or less of the population. However, he concluded that they share certain characteristics.

- An efficient perception of reality
- An acceptance of themselves, others, and nature
- A spontaneity, simplicity, and naturalness
- A focus on problems outside themselves
- A sense of detachment and the need for privacy
- A freshness of appreciation
- Mystical or peak experiences
- Social interest
- Profound interpersonal relations
- A democratic character structure
- Creativeness
- Resistance to enculturation

### 3.3.2 Carl Rogers

Rogers did not put much importance to unconscious forces or other Freudian explanations. He also rejected the notion that past events exert a controlling influence on present behaviour. Although he recognized that childhood experiences affect the way we perceive our environment, and ourselves, Rogers insisted that current feelings and emotions have a greater impact on personality. Because of this emphasis on the conscious and the present, Rogers suggested that personality could only be understood from our own viewpoint, based on our subjective experiences.

#### Person Centered Perspective

Carl Rogers originated a popular approach to psychotherapy known initially as non-directive or client-centered therapy and later as person-centered therapy. Carl Rogers agreed that people have self-actualizing tendencies.

Rogers' person-centered perspective held that people are basically good. Like plants, we are primed to reach our potential if we are given a growth-promoting environment. People nurture our growth, and we nurture theirs in three ways (Rogers, 1980):

- **Being genuine:** If we are genuine to another person, we are open with our own feelings. We drop our false fronts and are transparent and self-disclosing.
- **Being accepting:** If we are accepting, we offer the other person what Rogers called *unconditional positive regard*. This is an attitude of total acceptance. We value the person even knowing the person's failings. We all find a huge relief to drop our pretences, confess our worst feelings, and discover that we are still accepted. In a good marriage, a close family, or an intimate friendship, we are free to be ourselves without fearing what others will think.
- **Being empathic:** if we are empathic, we share another's feelings and reflect that person's meanings back to them.

Genuineness, acceptance, and empathy are, according to Rogers, the water, sun, and nutrients that enable people to grow like vigorous oak trees. As persons are accepted and prized, they tend to develop a more caring attitude toward themselves (Rogers, 1980). As persons are empathically heard, it becomes possible for them to listen more accurately to the flow of inner experiencing.

Rogers called for genuineness, acceptance and empathy in the relationship between therapist and client. But he also believed that these three qualities nurture growth between two human beings – between leader and group member, teacher student, manager and staff member, parent and child, friend and friend.

### **The self and the tendency toward actualization**

Rogers came to recognize the importance of an autonomous self as a factor in his own development. He investigated the child's background and had the child rated on factors he believed would influence behaviour. These factors included the family environment, health, intellectual development, economic circumstances, cultural influences, social interactions, and level of education. All of these factors are external, that is, part of the child's environment.

Rogers also investigated a potential internal influence, the child's self-understanding or self-insight. Rogers described self-insight as an acceptance of self and reality, and a sense of responsibility for the self.

Rogers believed people are motivated by an innate tendency to actualize, maintain, and enhance the self. This drive toward self-actualization is part of a larger actualization tendency, which encompasses all physiological and psychological needs. By attending to basic requirements—such as the needs for food, water, and safety—the actualization tendency serves to maintain the organism, providing for sustenance and survival.

For Rogers, experiences that we perceive as promoting actualization are evaluated as good and desirable; we assign them a positive value. Experiences perceived as hindering actualization are undesirable and, thus, earn a negative value. These perceptions influence behaviour because we prefer to avoid undesirable experiences and repeat desirable experiences.

### **Congruence and Incongruence**

Rogers said that people's self-concepts often don't exactly match reality. For example, someone may consider himself very honest, but often lies to his boss about why he is late for work. Rogers used the term incongruence to denote the discrepancy between self-concept and reality. Congruence, on the other hand, is a fairly close match between self-concept and reality.

According to Rogers, parents encourage incongruence when they give their children conditional love. If a parent only accepts a child when the child behaves in a certain way, the child is likely to block experiences that are seen as unacceptable. On the other hand, if the parents show unconditional love, the child can develop congruence. Adults whose parents provided conditional love would continue to change their experiences in adulthood to feel accepted.

### **Characteristics of fully functioning persons**

To Rogers, the fully functioning person is the desired result of psychological development and social evolution (Rogers, 1961). He described several characteristics of fully functioning (self-actualizing) persons:

- Fully functioning persons are aware of all experiences.
- Fully functioning persons live fully and richly in every moment.
- Fully functioning persons trust in their own organism.
- Fully functioning persons feel free to make choices without constraints or inhibitions.
- Fully functioning persons are creative and live constructively and adaptively as environmental conditions change.
- Fully functioning persons may face difficulties.

Rogers used the word actualizing, not actualized, to characterize the fully functioning person. The latter term implies a finished or static personality, which was not Rogers's intent. Self-development is always in progress.

### **Critics of humanistic theories**

Many psychologists have criticized the humanistic perspective.

- Its concepts are vague and based on theorists' personal opinions, rather than on scientific methods.

- Other critics objected to the attitudes that humanistic psychology encourages. They were concerned with what is satisfying their ego and personality.
- Humanistic psychology failed to appreciate all human capacity for evil.



### Application activity 3.3

1. Explain the critics of humanistic theory to psychoanalytic theory.
2. What proposed humanistic psychology to examine strength and virtues of humans?
3. What was the central idea of Abraham Maslow?
4. According to Carl Rogers people nurture their growth in 3 ways. What are they?
5. Provide at least 2 critics of humanistic theory.

## 3. 4. Cognitive theories of Personality



### Learning Activity 3.4

1. Explain the theory of social learning according to Albert Bandura.
2. How does the Rwandan adage “Uwiba ahetsa aba abwiriza uwo mu mugongo” much relate to Bandura’s social learning theory?
3. Explain how students copy from teacher’s behavior.

Cognitive personality theories are based on thoughts and perceptions, not on biological factors like genetics. Cognitive personality theories focus on a person’s self-perception, thoughts, values, and attitudes toward life events. They claim that a person’s thoughts influence emotions and thus contribute significantly to personality development. For example, if someone has a mental representation of themselves as honest, their behaviour will reflect that.

Modern psychology was influenced by cognitive personality theories in the 1960s when Canadian American psychologist Albert Bandura presented a theory called the Social Learning Theory. By the 1980s, this theory had evolved into a cognitive theory called the Social Cognitive Theory. Other theories based on Albert Bandura’s research followed, and today there are numerous cognitive approaches that have been postulated to explain personality.

### 3.4.1 Social cognitive theory

Social cognitive theory is basically a social learning theory based on the idea that people learn by observing what others are doing and that human thought processes are central to understanding personality. While social-cognitive theorists agree that learned behaviour has a significant impact on development as a result of interaction with the environment one is raised in, they believe that the cognition is as important as the individual and environment in determining moral development. Social-cognitive theories of personality emphasize the role of cognitive processes such as reasoning and judgment in personality development.

#### Albert Bandura (1925-2021)

Albert Bandura is a behavioural psychologist who developed the concept of reciprocal determinism, in which cognitive processes, behaviour, and context all interact and influence one another. Albert Bandura said that behaviour, internal personal factors, and environmental influences all act as interdependent determinants. Cognitive processes, behaviour and context all interact, with each factor simultaneously influencing and being influenced by the others. He pointed to **reciprocal determinism** to explain that in order to repeat pleasurable behaviour, the individual must engage their intellectual process, contrary to Skinner's belief that thinking only takes place in a black box. In this sense, Bandura agreed that environment causes behaviour, but behaviour can also cause environment. An example is when an adolescent exhibits his aggressive personality trait because he is being abused by his peers.

The social-cognitive perspective on personality that Bandura proposes focuses specifically on the many ways in which our individual traits and thoughts interact with our social world as we move from one situation to another. We bring a lot with us from every social situation we enter. We bring with us our past learning, often picked up through conditioning or by observing others.

We bring in our **self-efficacy**: our expectations about whether we will succeed and attempt new challenges. We also bring our approaches to certain situations. But situations themselves place different demands on us. For example, most of us are familiar with the general societal rules for acceptable behaviour at the funeral of loved ones. Ultimately, our behaviour in any situation is partly the result of our own traits and partly the result of the situation.

Social cognitive theorists explore the interaction among the three sets of influence:

- i) **Different people choose different environments.** What school do you attend? What do you read? What music do you listen to? With whom do

you enjoy spending time? All these choices are part of an environment you are choosing, based partly on your personality. We choose our environment, and then it shapes us.

- ii) **Our personalities shape how we interpret and react to events.** **Anxious** people tend to attend and react strongly to relationship threats. If we perceive the world as threatening, we will watch for threats and be prepared to defend ourselves.
- iii) **Our personalities help create situations to which we react.** How we view and treat people influences how they then treat us. If we expect that others will not like us, our desperate attempt to seek their approval might cause them to reject us. Depressed people often engage in this excessive reassurance seeking which may confirm their negative self-views.

After Bandura theorized that personality as revealed in his behaviour and environment is part of a two-way process, he later suggested that there is another factor to consider in this type of interaction, the person's **cognitive process**. Cognitive processes relate to all previously learned characteristics, including beliefs, expectations, and personality traits. Behaviour refers to anything we do that can be rewarded or punished. Finally, the context in which the behaviour occurs refers to the environment or situation that includes rewarding/punishing stimuli.

In addition to the interaction of internal personal factors, the environment and our behaviour, we also experience gene-environment interaction. Our genetically influenced traits evoke certain responses in others that can tip one way or the other. In a classic study, those with interacting factors of (1) a particular gene associated with aggression and (2) having grown up in a difficult environment were most likely to exhibit antisocial behaviour in adults. Our behaviour is influenced in every moment by our biology, our social and cultural experiences, as well as our thought processes and characteristics.

### 3.4.2 Other cognitive theories

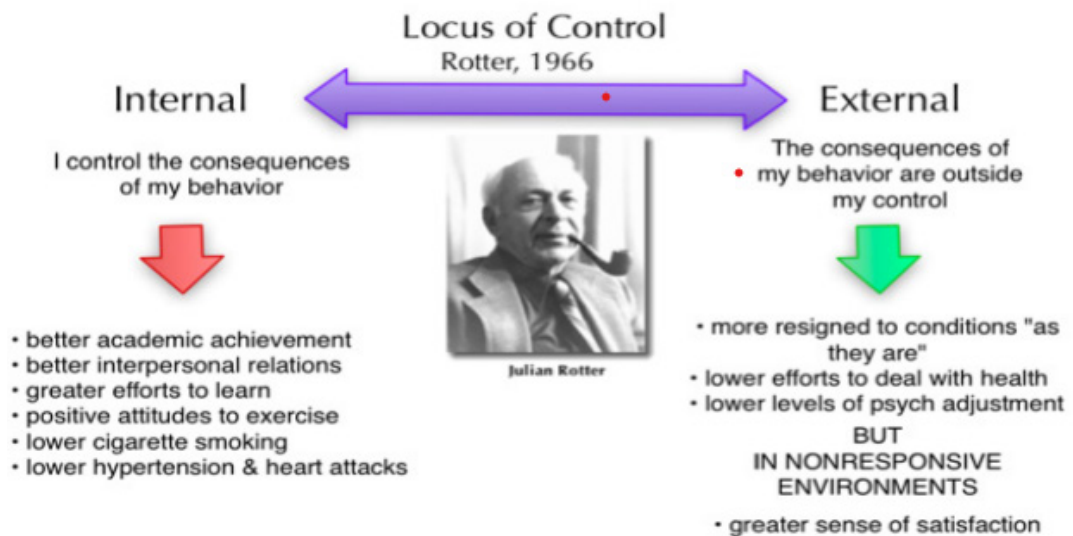
#### A) Rotter's theory

Expanding on Bandura's ideas, Rotter developed the term locus of control to describe our belief in the power we have over our lives. A person with an internal locus of control believes that their rewards in life are guided by their own choices and efforts. When they fail, they believe it is because of their own lack of effort. A person with an external locus of control believes that rewards or outcomes are determined by luck, chance, or other people with more power than them. When they don't succeed, they believe it's due to forces beyond their control.

He is a clinical psychologist who was influenced by Bandura's social learning theory after rejecting a strict behaviourist approach. Expanding on Bandura's ideas of reciprocal determinism, he developed the notion of locus of control to describe how individuals view their relationship to the environment. Unlike self-efficacy, which involves our belief in our own abilities, locus of control relates to our beliefs about the power we have over our lives and is a cognitive factor that influences personality development. Locus of control can be classified along a spectrum from internal to external, which determines the extent to which people believe they can influence events around them.

Rotter's theory of locus of control places an individual on a spectrum between internal and external.

*Figure 4: Rotter's locus control*



<https://courses.lumenlearning.com/boundless-psychology/chapter/social-cognitive-perspectives-on-personality/>

- **Internal locus control:** A person with an internal locus of control believes that their rewards in life are guided by their own decisions and efforts. If they do not succeed, they believe it is due to their own lack of effort. An internal locus of control has been shown to develop along with self-regulatory abilities. People with internal locus of control tend to internalize both failure and success. Many factors have been associated with an internal locus of control. Males tend to be more internal than females when it comes to personal success, and hence more aggressive.

Another example is that a student with an internal locus of control may receive a poor grade and conclude that he/she did not revise enough and realize his/her effort was the cause of poor grade and decide to study harder next time.

- **External locus of control:** A person with an external locus of control sees their life as being controlled by luck, chance, or other people, especially others with more power than them. If they do not succeed, they believe it is due to forces outside their control.
- People with an external locus of control tend to externalize both successes and failures. Individuals who grow up in circumstances where they do not see hard work pay off, as well as individuals who are socially disempowered (such as people in a low socioeconomic bracket), may develop an external locus of control. Evidence has supported the theory that locus of control can be learned and can be modified.
- However, in non-responsive environment, where an individual actually does not have much control, an external locus of control is associated with greater sense of satisfaction. An example of external locus of control can be seen on student who, after getting poor marks, concludes that the test was poorly written and the teacher was incompetent, thereby blaming external factors out of his/her control.

## **B. Walter Mischel**

Somehow similar to Bandura's proposal, Walter's states that an individual's behaviour is influenced by two things: the specific attributes of a given situation and the manner in which he perceived the situation. In contrast to traditional social cognitive theories, Walter argued that a person only behaves in a similar manner whenever these actions are highly probable to yield into the same results. He emphasized that we have individual differences, so our values and expectancies must be considered in predicting a person's behaviour and personality.

According to Walter Mischel, there are five personal variables that contribute to the conditions of a specific situation. They are used in predicting how a person will most likely behave. These variables are:

- Competencies: our intellectual capabilities and social skills.
- Encoding strategies and personal constructs: what people pay attention to, and what meaning they attach to the stimulus to attend to.
- Expectancies: the expected result of different behaviours that are realized by the person inside his mind.
- Subjective values: the respective value of each possible outcome of various behaviours.
- Self-regulatory systems: the groups of rules and standards that people adapt in order to regulate their behaviour.

## Criticism of social cognitive theory

- The theory does not provide a full explanation of how social cognition, behaviour, environment and personality are related like in the theory known as reciprocal determinism.
- Another criticism is that the theory is not a unified theory. This means that the different aspects of the theory may not be connected. For example, researchers currently cannot find a connection between observational learning and self-efficacy within the social cognitive perspective.
- Another limitation is that not all social learning can be directly observed. Because of this, it can be difficult to quantify the effect that social cognition has on development. Similarly, many aspects of personality are subjective and can be equally hard to measure and quantify.
- Finally, this theory tends to ignore maturation throughout the lifespan. Because of this, the understanding of how a child learns through observation and how an adult learns through observation are not differentiated and factors of development are not included.

*Table 7: Comparing the major personality theories*

Personality theory	Key proponents	Assumptions	View of personality	Personality assessment methods
Psychoanalytic	Freud	Emotional disorders spring from unconscious dynamics, such as unresolved sexual and other childhood conflicts, and fixation at various developmental stages.	Personality consists of pleasure-seeking impulses (the id), a reality-oriented executive (the ego), and an internalized set of ideals (the superego).	Free association, projective test, dream analysis.
Psychodynamic	Adler, Horney, Jung	The unconscious and conscious minds interact. Childhood experiences and defense mechanisms are important.	The dynamic interplays of conscious and unconscious motives and conflicts shape our personality.	Projective tests, therapy sessions

Humanistic	Rogers, Maslow	Rather than examining the struggles of sick people, it's better to focus on the ways healthy people strive for self-realization.	If our basic human needs are met, we will strive toward self-actualization. In a climate of unconditional positive regard, we can develop self-awareness and a more realistic and positive self-concept.	Questionnaires, therapy sessions
Trait	Allport, Eysenck, McCrae, Costa	We have certain stable and enduring characteristics, influenced by genetic predispositions.	Scientific study of traits has isolated important dimensions of personality, such as the Big Five traits (conscientiousness, agreeableness, neuroticism, openness, and extraversion).	Personality inventories
Social cognitive	Bandura	Our traits interact with the social context to produce our behaviors.	Conditioning and observational learning interact with cognition to create behaviour patterns.	Our behaviour in one situation is best predicted by considering our past behaviour in similar situations.

**Source:** Myers & Dewall (2017, p. 366)



### Application activity 3.4

1. Briefly summarize the view of social cognitive theory of personality.
2. Fill in the missing terms in the following sentence:

Albert Bandura proposed the-----  
perspective on personality which emphasizes the interaction of people  
with their environment. To describe the interacting influences of behavior,  
thoughts, and environment, he used the term-----

3. You are given several concepts used by different theorists in the cognitive theory of personality. In the table you are provided some explanations of those concepts. Put the concepts in the table in front of their correct explanations. The concepts are: self-efficacy, cognitive processes, internal locus control, self-regulatory system.

Concepts	Explanations
	Our expectations about whether we will succeed and attempt new challenges.
	A person with this personality believes that his rewards in life are guided by his own decision and efforts. If he/she does not succeed, he/she believes it is due to his/her own lack of effort.
	The groups of rules and standards that people adapt in order to regulate their behavior.
	All previously learned characteristics, including beliefs, expectations, and personality traits.

### 3. 5. End Unit Assessment



#### End unit assessment

1. What was Freud's view of personality and its development?
2. How did Freud think people defended themselves against anxiety?
3. Which of Freud's ideas did his followers accept or reject?
4. Select explanations from list II to match the type of defense mechanisms that goes with each in list I.

List I: Defense mechanisms	List II: Explanations
Sour grape lemon rationalization	It is an attempt by an individual to relieve an anxiety over his/her own conflicts by assuming the virtue of an admired person or group that seems free of such anxiety
Sweet lemon rationalization	This an attempt to make up for failure or loss of esteem by making an effort in another activity.
Repression	It is an attempt to rationalize failure by blaming the various factors involved, e.g., a boy who performs poorly may blame it on inadequate time, his pen, bad teacher, etc.
Identification	It is an attempt to explain failure by accepting it as good. A team that loses in a game might argue that they are tired of competing at national level or that they tried given the circumstances.
Compensation	It is an attempt by an individual to push into unconscious mind those experiences and thoughts that are in conflict or are painful to contemplate, so that he/she is no longer troubled by the feeling of inferiority

5. How did humanistic psychologists view personality, and what was their goal in studying personality?
6. How has the humanistic perspective influenced psychology?
7. Are we helped or hindered by high self-esteem?
8. Describe Maslow's self-actualizing personality.
9. Provide examples of physiological needs.
10. What are the levels of human needs as developed by Maslow?

11. How did humanistic psychology provide a fresh perspective?
12. (a) What does it mean to be emphatic? (b) How about self-actualization? (c) Which humanistic psychologists used these terms?
13. In the view of social-cognitive psychologists, what mutual influences shape an individual's personality?
14. What are the causes and consequences of personal control?
15. What underlying principle guides social-cognitive psychologists in their assessment of people's behaviour and beliefs?
16. What has the social-cognitive perspective contributed to the study of personality, and what criticism has it faced?

# Unit 4

## PERSONALITY TYPOLOGIES

 **Key unit competence:** Classify the personality typologies.



### Introductory activity

1. Write a letter describing yourself to stranger. Paint an accurate self-portrait of yourself in words. Begin with simple facts and make sure that the reader will have a picture of yourself. Use expressions like :
  - I am a student in the secondary school X ;
  - I am a member of anti-violence club ;
  - I am thick-skinned or sensitive ;
  - I am out going or shy;
  - I am aggressive or timid;
  - I am emotional or restrained.
2. Do you think these traits you describe in the letter will still characterize you in the coming ten years? Justify your answer with good arguments.
3. Do your thinking and acting change in time? Why?

## 4.1. Concepts of personality typologies

### Learning Activity 4.1



In a recruitment test candidates are given a list of adjectives from which they must choose those that match their personality. The aim was to select employees whose personalities matches the new job. The list of adjectives is given here: docile, shy, irritable, confident, positive, sharp, risk-taking, imaginative, initiator, sociable, lazy, careless, skeptical, courageous, easy-going, negotiable, dominant, passive, aggressive, optimistic, pessimist, kind, honest, cooperative, perfectionist, self-control, open to change, sensitive, introvert, extrovert, outgoing, reserved, impulsive, self-reliant, emotional stability, warmth, anxiety, ...

Assume that you are one of the candidates for the recruitment test.

#### **Question 1:**

- Select 7 adjectives that best describe your personality type. Make a description of this personality type in your own words.
- Pick 7 adjectives that describe your worst personality type. Describe this person.

**Question 2:** Mention the names of psychologists who developed the following theories.

(1) Psychoanalytic theory, (2) psychodynamic theory, (3) Humanistic psychology, (4) Social cognitive theory.

**Question 3:** Provide examples of human needs as explained by Maslow.

### 4.1.2 Why do we need a personality typology?

A typology provides a system for classifying people into categories: categories made up of people who share similar configurations of personality attributes. Thus, a typology in psychology would serve the same function as taxonomic systems in other sciences. Taxonomies play a crucial role in the natural sciences. Each subject has developed a framework for classifying its subject matter. Biologists study animals and therefore have developed a way to classify animals into categories such as mammals, birds and fish. Chemists study elements, so they came up with the periodic table; and astronomers study stars, so they came up with a classification system for stars. In psychology we study people, but we don't have a standard way of classifying people.

Just as animal taxonomy helps life sciences, individuals could be classified into groups and then we would know something about them based on their personality type. Such a typology would provide an effective descriptive system for conveying general information about an individual and help us refine our predictions. And by delving into the etiology and psychological dynamics of each type, we could learn more about the mechanisms driving behaviour and the role of individual personality differences.

### 4.1.2 Understanding typology

Typology is defined as classification according to general type, particularly in archaeology, psychology or the social sciences. It is also defined as the system in which people are classified into a limited number of categories. The Merriam-Webster dictionary defines typology as a study or analysis, or classification based on types or categories.

You may have heard people say, "I know the type!" or "He's not my type." They're talking about the kind of person someone is — similarly, typology is a way of classifying and dividing people or things according to types.

For example, you could talk about drivers in terms of cautious drivers, confident drivers, and careless drivers. Social scientists — especially anthropologists and psychologists — are the most likely to describe the way they classify things as *typology*.

In psychology, personality type refers to the psychological classification of different types of individuals. Personality types are sometimes distinguished from personality traits, the latter embodying a smaller grouping of behavioural tendencies. Types are sometimes referred to as qualitative differences between people, while characteristics can be construed as quantitative differences.

For example, according to type theories, introverts and extraverts are two fundamentally different categories of people. According to trait theories, introversion and extraversion are part of a continuous dimension that many people find themselves in. Unlike personality traits, the existence of personality types remains highly controversial.

Effective personality typologies reveal and increase individuals' knowledge and understanding, as opposed to decreasing knowledge and understanding, as occurs in the case of stereotyping. Effective typologies also allow for an improved ability to predict clinically relevant information about people and to design effective treatment strategies.

### 4.1.3 Typological method

By observing and describing a great number of people, psychologist identified several typologies:

- **Morphological typologies:** They are based on searching the resemblance and difference of behaviour traits through individual form and structure.
- **Physiological traits:** They are based on the difference between the nervous system functioning and endocrine gland functioning.
- **Psychological typologies:** They are based on the observation and description of different behaviour traits.
- **Mixed typologies:** They establish the correspondence between morphological, physiological, and psychological aspects.

### 4.1.4 What is personality trait?

The personality trait is a relatively stable, consistent, and enduring internal trait derived from a pattern of the individual's behaviours, attitudes, feelings, and habits. It is a personality trait that endures (lasts) over time and across different situations. It focuses on measuring, describing, and identifying individual personality differences in terms of traits.

Individuals have certain characteristics that partly determine their behaviour. These traits are trends in behaviour or attitude that tend to be present regardless of the situation. An example of a trait is extraversion and introversion. Extraversion (or extroversion) tends to be manifested in outgoing, talkative, energetic behaviour, whereas introversion is manifested in more reserved and solitary behaviour. An individual may fall along any point in the continuum, and the location where the individual falls will determine how he/she responds to various situations.

The study of personality traits can be useful in summarizing, predicting, and explaining a person's behaviour, and there are a variety of personality trait theories, including the Allports personality trait theory and the Cattells personality trait theory. They will be studied in the subsequent lessons.

### **Three assumptions about personality traits**

#### **1. Personality traits are relatively stable over time.**

Example: A person who is shy at parties at age twenty is likely still to be shy at party five, ten, even twenty years later. Research evidence supports this view. James Conley (1985) for example, compared the personality traits of several hundred adults at three different times in their lives. He discovered that extraversion; neuroticism and impulse control did not showed major change over a forty-five years period.

#### **2. Personality traits are consistent over time.**

Example: A person who is domineering at work is likely to be domineering at home at parties or other settings. The assumption here is that on average people will act in the same way in many different situations. Research, too, supported this view. Nancy Cantor (1985), for example, found that college freshmen students used consistent strategies to pursue in their goals to get good grades and making friends.

#### **3. Individual differences are the result of differences in the strength, number and combination of traits.** No two individuals are alike, but the differences are largely a matter of degree. Example: Everyone can be classified as more or less sociable. But sociability can be seen as a continuum with two extremes. Most people fall between these two extremes.

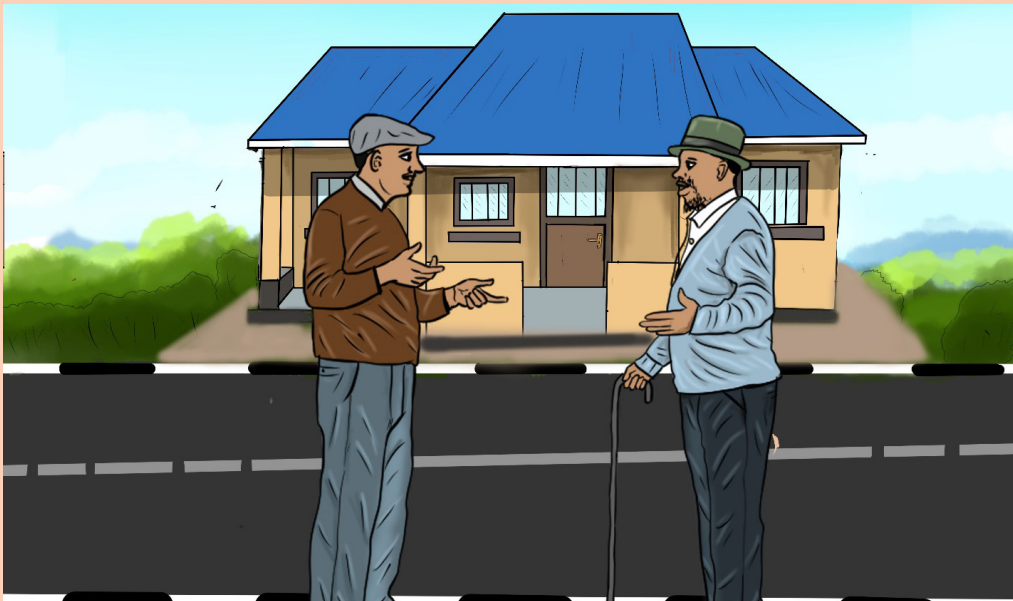


### **Application activity 4.1**

1. Explain at least 3 reasons why we need a personality type.
2. Differentiate between morphological typologies and physiological traits.
3. Differentiate between introversion and extroversion.
4. With examples, explain the reason why we assume that individual differences are the result of differences in the strength, number and combination of traits.

## 4.2. Classification of personality by Heymans and Wiersma

### Learning Activity 4.2



Last month, two men were talking about their wives. Mr. Kanani did not like the way his wife behaves in front of people. He said: If my wife disagrees with any opinion, she reacts immediately. And I don't like it. Mr. Matubo replied that his wife was the opposite of Kanani's wife. His wife does not directly respond to what she hears. It takes her a lot of time to reply to what she was told. Mr. Matubo was not satisfied with his wife as he prefers a woman who responds immediately. At least, he said, if there was a problem between us, we could resolve it without delay. For his part, Mr. Kanani preferred a woman who takes the time to react, as he believes this woman always has time to think about the problem and respond positively. He said that people who react immediately are choleric, rude, sometimes very angry and get irritated very easily. Matubo said that when people take the time to respond, it would be very difficult to read their minds and feelings.

#### Questions:

1. Based on the story, write down all the words that would characterize both women.
2. Building on 1 try to list down as many words as possible that are used in our society to describe people's personality.
3. Do you prefer a person with traits like Kanani or Matubo's wife? Explain

While Heymans (Dutch psychologist) used experiments for most of his contributions to general psychology, he relied on the biographical method and the questionnaire method for his work in differential psychology. In his research, he discussed the results of an extensive biographical study in which he coded 110 mostly well-known historical figures (94 men and 16 women), of which he gives their name, occupation, nationality, and the century in which they lived on 88 personality characteristics (Heiser, 2008).

Apart from the personality characteristics, he also coded all subjects on three major personality traits: emotionality, activity, and the relative importance of the primary or secondary function (corresponding to the present-day distinction extraversion-introversion). These three variables were inspired partly by an attempt to account for the classic humour theory of temperament.

Heymans used a diagram of a cube to illustrate his theory. The three basic bipolar dimensions are (1) degree of activity, (2) degree of emotionality and (3) relative predominance of primary or of secondary function (Vandenberg, 1966). Under activity, Heymans understood vital energy displayed in the overall life pattern of meaningful behaviour, and not physical activity. He defined Emotionality as the ready expression of emotions and the intensity of feelings and regarded as a rather valuable component of many personalities. His distinction between primary and secondary function he borrowed from Otto Gross (1902). When the primary function predominates, a person is more influenced by the impressions of the moment, while the predominating of the secondary function leads to greater influence of the residue of past experiences.

Inspired by Ernst Kretschmer and by Jung, Heymans and Wiersma, created a personality (or temperament) classification based on a cube with three axes:

- Activity (x-axis): energy and quantity of action in response to a motive or stimulus.
- Emotivity (y-axis): strength and frequency of emotional response to an event or stimulus.
- Secondary: degree to which emotions, events, or images have long term effects.

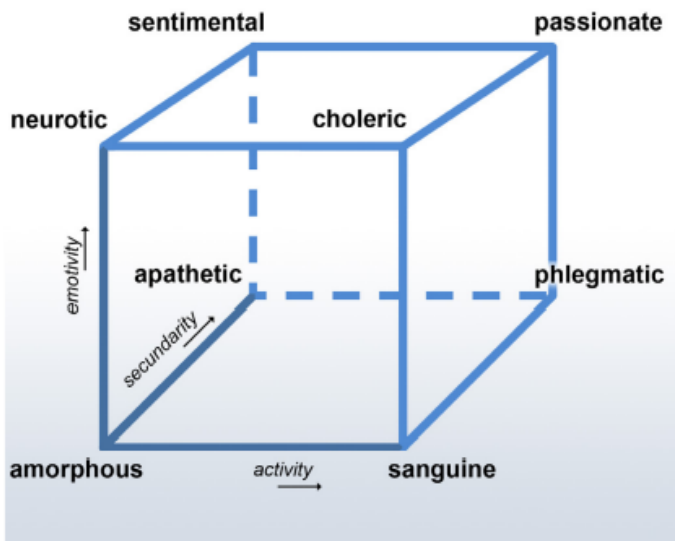
With every dimension having two poles: + and -; Heymans constructed the following eight types (temperaments) by combination of the three variables in binary form:

Table 8: Heymans' eight types

Type	Emotionality	Activity	Primary and Secondary Function
Neurotic (E <sup>+</sup> A <sup>-</sup> S <sup>-</sup> )	+	-	-
Sentimental (E <sup>+</sup> A <sup>-</sup> S <sup>+</sup> )	+	-	+
Sanguine (E <sup>-</sup> A <sup>+</sup> S <sup>-</sup> )	-	+	-
Phlegmatic (E <sup>-</sup> A <sup>+</sup> S <sup>+</sup> )	-	+	+
Choleric (E <sup>+</sup> A <sup>+</sup> S <sup>-</sup> )	+	+	-
Passionate (E <sup>+</sup> A <sup>+</sup> S <sup>+</sup> )	+	+	+
Amorphous (E <sup>-</sup> A <sup>-</sup> S <sup>+</sup> )	-	-	-
Apathetic (E <sup>-</sup> A <sup>-</sup> S <sup>+</sup> )	-	-	+

**Source:** Adapted from Heiser (2008) and Vandenberg (1966)

The eight types were presented using a cube known as Heymans' cube (figure 4)



**Cube of Heymans**

On the apexes the eight temperaments

Figure 5: Cube of Heymans



## Application activity 4.2

1. In short describe the work of Heymans.
2. What are the formulae of the following temperament types: Neurotic, sentimental, choleric, Phlegmatic and amorphous?
3. Explain the three axes in the Cube of Heymans.

## 4.3 Trait approach

### Learning Activity 4.3



Last month, Mary celebrated her 20th birthday. Her friends organized a surprise to her and brought her in a decorated room with birthday cake on the table. He failed to manage her emotion and cried in front of her friends. Mugeni said that it is normal, and she may behave in the same way. Rachael said that it was unusual, and she disliked that manner. The girls were talkative and continued to discuss in their way from the party. Kagoyire who was very quiet among the three girls did not comment and show her position.

1. Based on the story, who is introvert and who is extrovert?
2. List other traits that can be attributed to everyone stated in the story. How do they differ in personality according to their traits?

The trait theories of personality suggest that each person's personality is composed of a number of different characteristics. Trait theories look to identify specific traits that form the basis for personality and behaviour types. Different models and catalogues of traits have been proposed, and different personality types can be understood through different arrangements of traits within individuals.

Trait theorists believe that personality can be understood by positing that all people have certain trait, or characteristic and ways of behaving. Do you tend to be sociable or shy, passive or aggressive, optimistic or pessimistic? The modern theories come from Gordon Allport, Raymond Cattell, and Hans Eysenck.

### 4.3.1 AllPort's Trait Approach

Gordon W. Allport searched for words that could describe people in a dictionary and found about 18,000 different words. After simplifying his descriptions, he came up with three kinds of traits.

- **Cardinal trait:** It is a single trait that directs a major portion of a person's behaviour. This includes people who sacrifice their own good for the benefits of others. They stand at the top of the hierarchy and are collectively known as the individual's master control. They are considered to be individual's ruling passions. Cardinal traits are powerful, but few people have personalities dominated by a single trait. Instead, our personalities are typically composed of multiple traits. Example: Mother Theresa's altruism. Allport says cardinal traits are rare. Most individuals do not have one predominant trait. Instead, they have combinations of different traits.
- **Central traits:** They are based on life experiences. Central traits are those that make up our personalities. These are general characteristics found in varying degrees in every person (such as loyalty, kindness, agreeableness, friendliness, sneakiness, wildness, or grouchiness). They are general characteristics that we use to describe people. Examples include kind, sincere, cool, jolly, agreeable, friendly, sneaky, wild, etc. Certain central traits are unified together and manifested in a person's behaviour. Example: For the Americans General Collin Powell, the first black American to be chief of staff might be said to have central traits having ambition, achievement and service to his country. Every society has public figures possessing central traits.

- **Secondary traits:** They are characteristic modes of behaviour that are less important than central traits. They exist at the bottom of the hierarchy and are not quite as obvious or consistent as central traits. They are plentiful but are only present under specific circumstances; they include things like preferences and attitudes. These secondary traits explain why a person may at times exhibit behaviours that seem different with their usual behaviours.

For example, a friendly person gets angry when people try to tickle him; another is not an anxious person but always feels nervous speaking publicly. They are seen in few situations. Example: Tastes and preferences for certain foods or styles of music are secondary traits.

### **Strength of traits theory**

- Provide useful description of personality and its structure.
- Provide a foundation of valid and reliable personality devices.

### **Weakness of traits theory**

- Can lead people to accept and use an oversimplified classifications and descriptions.
- Underestimate socio-culture influences on behaviour.

## **4.3.2 Cattell's personality traits**

One theory of personality was proposed by a psychologist named Raymond Cattell. He created a taxonomy of 16 different personality traits that could be used to describe and explain individual differences between people's personalities.

### **The 16 Personality Factors**

According to trait theory, human personality is composed of a number of broad traits or dispositions. Some of the earliest of these trait theories attempted to describe every single trait that might possibly exist. For example, psychologist Gordon Allport identified about 18,000 words in the English language that could be used to describe personality traits. Later, Raymond Cattell analysed this list and whittled it down to 171 characteristics, mostly by eliminating terms that were redundant or uncommon. He was then able to use a statistical technique known as factor analysis to identify traits that are related to one another. Factor analysis can be used to look at enormous amounts of data in order to look for trends and to see which elements are the most influential or important. By using this method, he came up with a list of 16 key personality factors.

According to Cattell, there is a continuum of personality traits. In other words, each person contains all of these 16 traits to a certain degree, but they might be high in some traits and low in others. While all people have some degree of abstractedness, for example, some people might be very imaginative while others are very practical.

Cattell concluded that personality is composed of sixteen primary or source traits. These traits are opposing tendencies.

*Table 9: The 16 Personality Factors*

S/N	Primary/source traits	Opposing tendencies
1	Reserved	Outgoing
2	Less intelligent	More intelligent
3	Stable, ego strength	Emotionality/ neuroticism
4	Humble	Assertive
5	Sober	Happy-go-lucky
6	Expedient	Conscientious
7	Shy	Venturesome
8	Tough-minded	Tender-minded
9	Trusting	Suspicious
10	Practical	Imaginative
11	Forthright	Shrewd
12	Placid	Apprehensive
13	Conservative	Experimenting
14	Group-dependent	Self-sufficient
15	Undisciplined	Controlled
16	Relaxed	Tense

To Cattell, trait is structure of the personality inferred from behaviour in different situations. He classified traits into four categories. These are:

- **Common traits:** These are traits found widely distributed in the general population or among all groups (e.g., honesty, aggression, cooperation).
- **Unique traits:** These are traits possessed by particular persons as temperamental traits and emotional reactions.
- **Surface traits:** These are traits which can be easily recognized by overt manifestations of behaviour (e.g., curiosity, integrity, tactfulness dependability).
- **Source traits:** These are the underlying structure or sources that determine the behaviour of the individual. They are inferred from behaviour. Dominance and emotionality are source traits.

### 4.3.3 Eysenck's dimensions of personality

According to Hans J. Eysenck, biological elements like DNA and environmental cues play a significant role in determining personality. The so-called "Eysenck Personality" is described by the *Eysenck theory of personality*. According to this view, every human has a core set of characteristics that make them distinct from other animals, and every person has a unique temperament or temperament type. How we act and react in daily life is a good way to describe our personalities. People who have a certain temperament type typically behave differently than people who have other temperament types. There are several hypotheses explaining why some people's temperaments do not match those of others; this hypothesis places a strong emphasis on genetic inheritance.

#### The PEN model of Eysenck instrument

As was previously noted, Eysenck's personality theory only has two dimensions that assess an individual's extraversion and neuroticism qualities. However, the current focus of Eysenck's strategy is on three PEN-named dimensions. Such dimensions are what will follow.

- **Psychoticism-Normality:** Psychoticism is a personality trait characterized by a lack of empathy, a poor ability to form attachments, and a lack of concern for others. People who are high in psychoticism are more likely to be aggressive, antisocial, and have substance abuse problems. In contrast, people who are low in psychoticism are more likely to be emotionally stable and empathetic and to have healthy relationships.
- **Extraversion-Introversion:** In psychology, the terms "extraversion" and "introversion" describe two different personality types. Extraverted people are outgoing and friendly, and they tend to be energized by social interactions and quickly get bored when alone. Introverted people are more reserved and prefer solitary activities; they are often more thoughtful and reflective than extroverts. Both personality types have their strengths and weaknesses.
- **Neuroticism-Emotional Stability:** Neuroticism is a personality trait characterized by anxiety, worry, and insecurity. People high in neuroticism tend to be more vibrant and reactive to stress, and they are also more likely to experience negative emotions like sadness, anger, and fear. Conversely, emotional stability is the ability to remain calm and level-headed during stress or adversity. It is a trait prized in many cultures and professions and can be learned and cultivated.

### 4.3.4 Typology of Carl Gustav Jung: Introvert and extrovert

Jung also emphasized on two attitudes: - Introversion and extroversion. Extraversion (or extroversion) tends to be manifested in outgoing, talkative, energetic behaviour, whereas introversion is manifested in more reserved and solitary behaviour. An individual may fall along any point in the continuum, and the location where the individual falls will determine how he/she responds to various situations. From these two attitudes he explained two types of personalities: Introvert and extrovert types.

*Table 10: Introvert and extrovert characteristics*

<b>Introvert</b>	<b>Extrovert</b>
<ul style="list-style-type: none"><li>- Shy</li><li>- Cautious</li><li>- Contemplative, and reserved</li><li>- Tends to have difficulty adjusting to social situations.</li><li>- Avoids attention</li><li>- Excessive daydreaming and introspection,</li><li>- Careful balancing of considerations before reaching decisions, and</li><li>- Like to be alone</li><li>- Thinks before speaking</li><li>- Stays on one topic</li><li>- Prefers written communication</li><li>- Pays attention easily</li><li>- Withdrawal under stress</li></ul>	<ul style="list-style-type: none"><li>- Characterised by outgoingness</li><li>- Responsiveness to other personas</li><li>- Activity</li><li>- Aggressiveness</li><li>- The ability to make quick decisions</li><li>- Energized by being with others</li><li>- Seeks attention</li><li>- Speak quickly and loudly</li><li>- Distractible</li><li>- Thinks out loud</li><li>- Prefers verbal communication</li><li>- Acts first, thinks later</li></ul>



### Application activity 4.3

1. Cattell proposed 16 source or primary traits and their opposing tendencies. In the following table, you are requested to write down the opposing tendencies of the given source traits.

S/N	Primary/source traits	Opposing tendencies
1	Reserved	
2	Humble	
3	Shy	
4	Trusting	
5	Practical	
6	Conservative	
7	Group-dependent	
8	Relaxed	

2. Explain the Eysenck theory of personality.
3. Provide examples of common traits in the typology of Cattell.
4. The current focus of Eysenck's strategy is on three PEN-named dimensions. List those dimensions.

## 4.4 The Big Five Theory

### Learning Activity 4.4



Tick in front of all characteristics that you think are yours:

Worried,	
Emotional	
Nervous	
Sociable	
Fun-loving	
Active	
Imaginative	

Artistic	
Creative	
Sympathetic	
Antipathic	
Reliable	
Hardworking	
Punctual	

Try to summarize your personality.

A common theme in the work of early trait theorists is that relatively few traits are required to accurately describe and predict an individual's behaviour. Based on this work, a Big Five theory identified five core traits: openness to experience, conscientiousness, urgency (extroversion), agreeableness, and neuroticism (McCrae & Costa, 1985, 1987). These are called also big 5 personality traits or major personality factors.

They are known as the **Big Five** because they encompass a wide range of personality related terms. The five factors are not necessarily traits in and of themselves, but factors into which many related traits and characteristics fit. For example, the agreeableness factor includes terms such as generosity, kindness, and warmth (on the positive side) and aggressiveness and temperament (on the negative side). All of these traits and characteristics and many more make up the broader factor of agreeableness.

Below we explain each factor in more detail, with examples and related terms to give you a sense of what aspects and quirks of personality these factors cover. A popular acronym for the Big Five is OCEAN or CANOE. The five factors are arranged in the following order: Openness to experience; Conscientiousness, Extraversion, Agreeableness and Neuroticism.

### i) **Openness to experience**

Openness to experience has been described as the depth and complexity of a person's mental life and experiences. It is also sometimes called intellect or imagination. Openness to experience concerns an individual's willingness to try new things, being vulnerable, and the ability to think outside the box. Openness to experience includes imagination, feelings, actions, ideas, values, and aesthetics (an appreciation for the arts).

- Open people (People who score high on openness) are curious, unconventional, and imaginative. They enjoy the art, engage in a creative career or hobby, and like meeting new people (Lebowitz, 2016a). They are more interested in exploring aspects of life that differ from their own, whether that means trying new foods, traveling to exotic places, or studying other religions.
- People who score low on openness are more likely to be practical, traditional, and compliant. They prefer the familiar to the new and choose a chain restaurant in a new city rather than experimenting with local cuisine. They prefer routine over variety sticks to what they know and prefers fewer abstract arts and entertainment.

## ii) **Conscientiousness**

Conscientiousness is a trait that can be described as the tendency to control impulses and act in socially acceptable ways, behaviours that facilitate goal-directed behaviour (John & Srivastava, 1999). Conscientious people are characterized by their ability to delay rewards, follow the rules, and plan and organize effectively. Conscientiousness includes competence, order, sense of duty, drive for achievement, self-discipline, and consideration.

- Individuals who score high on this trait are reliable, hardworking, and complete tasks on time. They are likely to be successful in school and in their career, to excel in leadership positions, and to doggedly pursue their goals with determination and forethought.
- People who score low on this trait are unreliable, somewhat lazy, and independent. They are much more likely to procrastinate, to be flighty, impetuous, and impulsive. It may be frustrating working on group projects with people who lack conscientiousness, but in certain circumstances they make valuable contributions.

## iii) **Extroversion**

This factor has two known ends of the spectrum: extroversion and introversion. It is concerns where an individual gets their energy from and how they interact with others.

In general, extroverts draw energy or gain energy from interacting with others, while introverts get tired from interacting with others and replenish their energy from solitude. Extroversion (opposite of introversion) is characterized by warmth, sociability, assertiveness, activity, excitement seeking, and positive emotions, although extroverts also tend to be a little insensitive and overbearing. Introversion is characterized by coolness, reserve, passivity, and caution, although introverts also tend to be sensitive and thoughtful.

Extroverts tend to seek out social activities and find them energizing, while introverts tend to want time to themselves to recharge their batteries. (Cacioppo & Freberg, 2013).

- People high in extroversion tend to seek out opportunities for social interaction, where they are often the life of the party. They are comfortable with others, sociable and prone to action rather than contemplation.
- People with low extroversion are more likely to be people of few words, people who are quiet, introspective, reserved, and thoughtful.

#### **iv) Agreeableness**

This factor affects how well people get along with others. While extroversion concerns sources of energy and seeking interactions with others, agreeableness concerns your orientation towards others. It's a construct based on how you generally interact with others. Agreeableness includes trustworthiness, altruism, trust, obedience, humility, and tenderness.

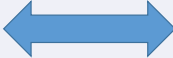
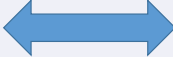
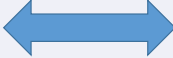
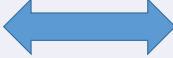
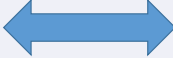
- People with high agreeableness tend to be popular, respected, and sensitive to the needs of others. They are likely to have few enemies, be sympathetic and loving toward their friends and loved ones, and understand the plight of strangers (Lebowitz, 2016a).
- People who score low on this trait tend to be cynical, uncooperative, and rude. They are less likely to be trusted and liked by others. They tend to be callous, blunt, ill-tempered, antagonistic, and sarcastic. A Once again, we face the challenge of finding benefits for a negative-sounding trait like disagreeableness. At least in the work environment, disagreeable people seem more able to make difficult decisions, while their agreeable colleagues may find it more difficult to supervise others (Rust, 1999).

#### **v) Neuroticism**

Neuroticism is the only Big Five factor where a high score indicates more negative traits. Neuroticism is not a factor of meanness or incompetence, but a factor of confidence and comfort in one's own skin. It includes emotional stability and general temperament. Neuroticism, combines anxiety, angry hostility, depression, self-consciousness, impulsivity, and vulnerability. The opposite trait could be described as emotional stability. In threatening and impoverished environments, a high level of neuroticism may be just what is needed to increase the chances of reproductive survival.

- Those high in neuroticism are generally prone to anxiety, sadness, worry, and low self-esteem. They can be temperamental or easily angered and tend to be self-confident and unsure of themselves (Lebowitz, 2016a).

- Individuals who score on the low end of Neuroticism are more likely to feel confident, with high assurance of themselves, and adventurous. They can also be bold and free from worries or self-doubt.

<b>(Memory: Picturing an OCEAN/CANOE will help you)</b>		
<b>Low score</b>	<b>Traits</b>	<b>High score</b>
Practical, prefers routine, conforming	Openness 	Imaginative, prefers variety, independent
Disorganized, careless, impulsive	Conscientiousness 	Organized, careful, disciplined
Retiring, sober, reserved	Extraversion 	Sociable, fun-loving, affectionate
Ruthless, suspicious, uncooperative	Agreeableness 	Soft-hearted, trusting, helpful
Calm, secure, self-satisfied	Neuroticism (Emotional stability vs instability) 	Anxious, insecure, self-pitying

**Source:** Information from McCrae & Costa (2008)

## **Strengths and weakness of Big Five Personality Factors**

### **Strengths:**

- Strength of the Big Five test model is that it has proven to be fairly accurate in predicting patterns of behaviour over a period of time.
- Strengths of the Big Five include its popularity with academic researchers and theorists; it has made significant contributions in research involving gender differences, learning methods, academic success, cultural differences, personality disorders, career success, and heritability.

### Weaknesses:

- The factors of the personality test are not independent of each other; for example, a pleasant person is more likely to be open and outgoing.
- The Big Five omits several important personality traits such as sense of humour, masculinity, femininity, honesty, manipulativeness, and frugality.
- Finally, The Big Five also presents the possibility of falsification and bias because the answers are collected through self-answered questions.



### Application activity 4.4

1. Explain the abbreviation OCEAN
2. List any strength and weakness of Big Five personality model.
3. Complete the following sentence: People with high agreeableness tend to be-----, -----, and ----- to the needs of others.

## 4.5. Personality preferences of Myers-Briggs



### Learning Activity 4.5

You are asked to answer individually the following questionnaire and you are asked to encircle the answer which comes closer to telling how you usually feel or act.

1. When you go somewhere for the day, would you rather:  
A. Plan what you will do and when, or  
B. Just go!!
2. If you were a teacher, would you rather teach:  
A. Facts-based courses, or  
B. Courses involving opinion or theory?
3. Are you usually:  
A. A “good mixer” with groups of people, or  
B. Rather quiet and reserved?
4. Do you more often let:  
A. Your heart rules your head. or  
B. Your head rules your heart?

5. In doing something that many other people do, would you rather:
  - A. Invent a way of your own, or
  - B. Do it in the accepted way?
6. Among your friends are you:
  - A. Full of news about everybody, or
  - B. One of the last to hear what is going on?
7. Does the idea of making a list of what you should get done over a weekend:
  - A. Help you, or
  - B. Stress you?
8. When you have a special job to do, do you like to:
  - A. Organize it carefully before you start, or
  - B. Find out what is necessary as you go along?
9. Do you tend to have:
  - A. Broad friendships with many different people, or
  - B. Deep friendship with very few people?
10. Do you admire more the people who are:
  - A. Normal acting to never make themselves the center of attention, or
  - A. Too original and individual to care whether they are the center of attention or not?

**Question:** Based on your responses, can you just describe yourself?

The Myers-Briggs Personality Type Indicator (MBTI) is a self-report inventory designed to identify an individual's personality type, strengths, and preferences. The questionnaire was developed by Isabel Myers and her mother, Katherine Briggs, based on their work with Carl Jung's theory of personality types. Today, the MBTI inventory is one of the most widely used psychological tools in the world.

### **An overview of the test**

Both Myers and Briggs were fascinated by Jung's theory of psychological types and recognized that the theory could have real-world applications. During World War II, they began researching and developing an indicator that could be used to understand individual differences. By helping people understand themselves, Myers and Briggs believed they could help people choose careers that best fit their personality types and lead healthier, happier lives.

Myers created the first pen-and-pencil version of the inventory in the 1940s, and the two women began testing the assessment on friends and family. Based on the answers to the inventory questions, individuals are identified as having one of 16 personality types. The goal of the MBTI is to enable respondents to further explore and understand their own personality, including their likes, dislikes, strengths, weaknesses, possible career preferences, and compatibility with other people.

No one personality type is “best” or “better” than another. It isn’t a tool designed to look for dysfunction or abnormality. Instead, its goal is simply to help you learn more about yourself. The questionnaire itself is made up of four different scales.

The basic concept of Myers-Briggs is that there are four main traits. These traits are represented by two opposites as explained in the following paragraphs:

### **Extraversion (E) – Introversion (I)**

The dichotomy between extraversion and introversion was first explored by Jung in his theory of personality types to describe how people react and interact with the world around them. Although these terms are familiar to most people, the way they are used in the MBTI differs somewhat from their common usage.

Extraverts (also often spelled extroverts) focus on the outside world of people and things. Get energy from interacting with people. They are active and prefer to communicate through speaking (instead of writing). They develop ideas by talking them through. The best way to learn is by sharing/doing/discussing. Extraverts are “outward-turning” and tend to be action-oriented, enjoy more frequent social interaction, and feel energized after spending time with other people. Introverts are “inward-turning” and tend to be thought-oriented, enjoy deep and meaningful social interactions, and feel recharged after spending time alone. We all exhibit extraversion and introversion to some degree, but most of us tend to have an overall preference for one or the other.

### **Sensing (S) – Intuition (N)**

This scale examines how people gather information from the world around them. Just like extraversion and introversion, all people spend some time sensing and intuiting depending on the situation. According to MBTI, people tend to be dominant in one area or another.

People who prefer sensing tend to pay close attention to reality, especially what they can learn from their own senses. They tend to focus on facts and details and enjoy getting hands-on experience. Those who prefer intuition pay more attention to things like patterns and impressions. They enjoy thinking about possibilities, imagining the future and abstract theories.

## Thinking (T) – Feelings (F)

This scale focuses on how people make decisions based on the information that they gathered from their sensing or intuition functions. People who prefer thinking place a greater emphasis on facts and objective data.

They tend to be consistent, logical, and impersonal when weighing a decision. Those who prefer feeling are more likely to consider people and emotions when arriving at a conclusion.

## Judging (J) – Perceiving (P)

The final scale involves how people tend to deal with the outside world. Those who lean toward judging prefer structure and firm decisions. Judging people prefer to make decisions with information and make decisions as soon as possible. They enjoy having closure; like things settled. They plan and organize their world and like roles and expectations to be clear. They enjoy getting things done/being productive and plan ahead to avoid last minute stresses.

People who lean toward perceiving are more open, flexible, and adaptable. These two tendencies interact with the other scales. Perceiving people prefer to take in information and understand. They keep things open-ended as long as possible. They seek to experience and live life; not control it. They are open to new options and last-minute changes. They enjoy starting projects but often never finish. They are able to adapt and are flexible. They found energy in last minute pressures.

Remember, all people at least spend some time engaged in extraverted activities. The judging-perceiving scale helps describe whether you behave like an extravert when you are taking in new information (sensing and intuiting) or when you are making decisions (thinking and feeling).

## The Myers Briggs Types

Each type is then listed by its four-letter code:

- **ISTJ - The Inspector:** Reserved and practical, they tend to be loyal, orderly, and traditional.
- **ISTP - The Crafter:** Highly independent, they enjoy new experiences that provide first-hand learning.
- **ISFJ - The Protector:** Warm-hearted and dedicated, they are always ready to protect the people they care about.
- **ISFP - The Artist:** Easy-going and flexible, they tend to be reserved and artistic.
- **INFJ - The Advocate:** Creative and analytical, they are considered one of the rarest Myers-Briggs types.

- **INFP - The Mediator:** Idealistic with high values, they strive to make the world a better place.
- **INTJ - The Architect:** High logical, they are both very creative and analytical.
- **INTP - The Thinker:** Quiet and introverted, they are known for having a rich inner world.
- **ESTP - The Persuader:** Out-going and dramatic, they enjoy spending time with others and focusing on the here-and-now.
- **ESTJ - The Director:** Assertive and rule-oriented, they have high principles and a tendency to take charge.
- **ESFP - The Performer:** Outgoing and spontaneous, they enjoy taking center stage.
- **ESFJ - The Caregiver:** Soft-hearted and outgoing, they tend to believe the best about other people.
- **ENFP - The Champion:** Charismatic and energetic, they enjoy situations where they can put their creativity to work.
- **ENFJ - The Giver:** Loyal and sensitive, they are known for being understanding and generous.
- **ENTP - The Debater:** Highly inventive, they love being surrounded by ideas and tend to start many projects (but may struggle to finish them).
- **ENTJ - The Commander:** Outspoken and confident, they are great at making plans and organizing projects.

Taking the Myers-Briggs Type Indicator can provide many insights into your personality, which is probably why the tool has become so popular. Even without completing the formal questionnaire, you can probably spot some of these tendencies in yourself right away. Remember that all types are equal and that every type has value.

When working in group situations, for example at school or at work, it can be very helpful to recognize your own strengths and to understand the strengths of others. As you work with other members of a group toward the completion of a project, you may find that certain members of the group are skilled and talented at performing specific actions. By recognizing these differences, the group can better assign tasks and work together to achieve their goals.

## Difference between MBTI and other instruments

The MBTI is just one approach to personality typing. Personality typing refers to systems that categorize people based on their traits, dispositions, and other characteristics. Other popular types of personality include:

- The Big Five Personality Assessment
- Cattell's 16 Personality Factor Questionnaire

However, the Myers-Briggs types differ in some important ways. First, the MBTI is not really a "test." There are no right or wrong answers, and one type is not better than any other type. The purpose of the indicator is not to evaluate mental health or offer any type of diagnosis.

Also, unlike many other psychological assessments, your results are not compared to any norms. Rather than looking at your score in comparison to other people's scores, the goal of the tool is simply to offer more information about your unique personality.

## Strength and weaknesses of MBTI

### Strengths

- The MBTI is a simple model: the 16 "types" described by Myers, and Briggs are dynamic entities with vast descriptive potential.
- People with no psychological training intuitively recognize the four dichotomies as real.
- The MBTI endeavours to be normatively neutral, avoiding negative or "wrong" personality traits like neuroticism; all individual differences are described as normal.
- The MBTI is extremely simple and minimalistic. As opposed to the Big Five construct, which has 36+ elements, facets, and scales, the MBTI has just 8: Introversion, Extroversion, Sensing, Intuition, Thinking, Feeling, Judging, and Perceiving.

### Weaknesses

- The theory is so deceptively simple that a certain subset of people believes themselves to be experts on the MBTI after two weeks of study or less.
- Many people with serious shortcomings or psychological pathologies use the positive type descriptions provided by the MBTI to gloss over these difficulties.
- The simplicity of the test questions causes people to mistakenly assume that the theory itself is simple as well.



### Application activity 4.5

1. What is a Personality Type Indicator (MBTI)?
2. Which psychologist influenced the work of Myers and Briggs?
  - a) Adler
  - b) Jung
  - c) Horney
  - d) Freud
3. In the typology of Myers-Briggs there are 4 main traits. List them.
4. Name the following types of Myers-Briggs typology and characterise them
  - ENFP
  - ESF

## 4.6. End unit assessment



### End unit assessment

1. How do psychologists use traits to describe personality?
2. Distinguish the following types of personality: (i) Extroverts, (2) Introverts
3. Think of your personality traits and classify them into three levels of Gordon Allport.
4. Which traits seem to provide the most useful information about personality variation?
5. Explain the criticism of big five dimensions of personality traits.
6. Where would you place yourself on the five personality dimensions: conscientiousness, agreeableness, neuroticism (emotional stability vs. instability), openness, and extraversion? Where might your friends place you?

7. In which category of PEN model of Eysenck can we put the following student? « Eddy is an aggressive and rude student. He is not empathetic towards other students. He has hard time making friends at school and at home. He does not appear to care about the well-being of his classmates and cannot sustain a relationship for long. In other words, Eddy is what society might call an antisocial person, largely due to his substance abuse and addiction».

# Unit 5

## HISTORY OF LEARNING PSYCHOLOGY

 **Key unit competence:** Examine the history of learning Psychology



### Introductory activity

Use internet and other books from the library and analyze the historical background of learning psychology

History of learning has long roots. Before Jesus Christ, the philosophers such as Plato, Socrates and others proposed various ways through which learning could take place. This unit, therefore, discusses different topics including Meaning of learning, early approaches to learning like Emotional self-regulation, Behavioral Self-Regulation, Cognitive Self-Regulation, Initiative, Curiosity and Creativity. Apart from Socrates and Plato, it also analyses the contribution of some psychologists to learning such as, Edward Lee Thorndike, John Watson and Ebbinghaus.

### 5.1. Understanding learning

#### Learning Activity 5.1



Using internet and other books from the library, find the meaning of learning from different psychologists.

#### 5.1.1. Definition of learning

Different psychologists' theorists define learning in various ways; the following are different meanings of learning they provide:

- **Behavioural theorists:** Behaviourists define learning as a relatively permanent change in behaviour and mental processes resulting from experience.

They argue that learning has only taken place if a change in behaviour is evident (observable). They add that learning is a lifelong process of acquiring knowledge, skills and positive behaviour and other elements of the culture from one generation to another.

- **Cognitivists define learning** as “a semi-permanent change in mental processes or associations.” They add that learning focuses more on complex cognitive processes such as thinking, problem solving, language, concept formation and information processing. For them, learning takes place when one understands the concept.
- **Constructivists:** Constructivists view learning as a process in which the learner actively constructs or build new ideas or concepts based on prior knowledge or experiences already acquired. They state that students use cognitive processes to construct knowledge or understanding of the material to be learnt. For them, **the student is the key to learning because he/she constructs knowledge for himself/herself.** Constructivists argue that people produce knowledge and form meaning based upon their experiences. They focus on preparing people to problem solving. They finally add that the outcomes are not always predictable because learners are constructing their own knowledge.
- **Social constructivists:** They stipulate that students construct knowledge for one another, collaboratively creating a small culture of shared artifacts with shared meaning. These theorists believed that young children are curious and actively involved in their own learning, discovery and development of understanding new schema. According to them much important learning by the child occurs through social interaction with skilful teacher. for the child to put together herself and offers encouragement when she does so. As a child becomes more competent the father allows the child to work more independently.
- **Social learning theorists:** Social learning theorists argue that people learn by observing models and imitating the behaviours of others. (Children learn through observing, modelling and imitating other’s behaviour). They add that much of human learning is not shaped by its consequences; but is more efficiently learned directly from a model.

For example, if students see their friend rewarded for a good work done, they may work hard so that they are also rewarded.

Shortly, learning is defined as a lifelong process of acquiring knowledge, skills and positive behaviour and other elements of the culture from one generation to another.

### 5.1.2. Types of Learning

- **Rote learning:** It is memorizing information without understanding its meaning so that it can be recalled by the learner exactly the way it was read or heard.
- **Meaningful learning:** This is the concept whereby learned knowledge is fully understood to the extent that it relates to other knowledge.
- **Imitation learning/observational or modelling or social learning.** Is a type of learning whereby people learn social behaviour mainly through observation and model/imitate what they observe. The main models for children include **parents, caregivers, teachers and peers.** For example, students can imitate their teachers in how they motivate them.
- **E-learning or Electronic learning:** E-learning refers to the use of information and communication technologies to enable the access to online learning/teaching resources.



#### Application activity 5.1

Match the theorists with their corresponding meanings they provided to learning.

Meanings	Theorists
1. People learn by observing and imitating the behaviors of others.	a. Behavioral theorists
2. Learning takes place when a learner builds his/her own knowledge based on experience	b. Social constructivists theorists
3. Learning has only taken place if a change in behaviour is observable	c. Social learning theorists
4. Learning by the child occurs through social interaction with a skillful teacher/adult	d. Cognitivists
5. Learning focuses more on complex cognitive processes such as thinking, problem solving, language, concept formation and information processing	e. Constructivists

## 5.2. Early approaches of learning ‘Emotional and Behavioral Self-Regulation’

### Learning Activity 5.2



Using internet and other books from the library, differentiate emotional self-regulation from behavioral self-regulation.

The early approaches to learning focus on how children learn. They refer to the skills and behaviors that children use to engage in learning.

### 5.2.1. Emotional self-regulation

#### a. Meaning of self-regulation

Self-regulation is the ability to act in your own long term best interest, to calm yourself when you are upset and to cheer yourself up when you are sad.

While as educated adults we know that to lead a healthy lifestyle we should drink less red wine, eat less chocolate, exercise regularly and have plenty of sleep, we don't always do it! That's because we are all continually developing our self-regulation skills.

Your students are the same. They may know what to do, but lack the self-regulation skills to always act appropriately. You will notice that students who fail to regulate their thoughts, emotions and behaviors find it difficult to make and keep friends, relate to others, organize their school work and express their feelings in appropriate ways.

Teaching students how to express their feelings in appropriate ways, to consider the consequences of their actions and how to develop positive relationships is crucial for strong student achievement. A positive classroom culture can foster these skills. Learning how to self-regulate means that students will develop stronger friendships, be able to pay attention, learn new things and better manage the normal stresses and disappointments of life.

#### b. Meaning of emotional self-regulation

Emotional self-regulation refers to the complex process of initiating, inhibiting, and modulating the conscious aspects of emotion to effectively achieve one's goals. It is the skill of considering how to respond to strong emotions.

It is also the ability to respond to the ongoing demands of experience with the range of emotions in a manner that is socially tolerable and sufficiently flexible to permit spontaneous reactions as well as the ability to delay spontaneous reactions as needed.

Briefly, emotional self-regulation refers to a persons' ability to understand and manage their own emotions, behaviors, impulses and reactions.

### **c. Importance of emotional self-regulation**

The following points witness how emotional self-regulation is important:

- Creativity helps students explore their inner world, develop greater self-awareness, and cope with stress.
- It involves all of the students' senses and creates new knowledge that didn't exist before.
- Students of all ages need to learn by creating.
- It helps students to synthesize information and bring joy and meaning into their educational experience.
- It enables students to generate new or innovative ideas.
- It gives students freedom to explore their surroundings and learn from them.
- It allows students to view and solve problems more openly and with innovation, it opens the students' mind.
- It promotes higher-order cognitive skills like problem solving, critical thinking, making connections between subjects
- It motivates students to learn (Students are most motivated to learn when certain factors are present. They're able to tie their learning to their personal interests, they have a sense of autonomy and control over their task, and they feel competent in the work they're doing).

### **d. Strategies that can help to manage emotions in a healthy and helpful way.**

There are various self-regulation strategies that all students need to be able to use, these include the following:

- Goal-setting
- Self-monitoring (Also called self-assessment or self-recording)
- Effective use of self
- Self instruction or self-talk
- Self-reinforcement
- Consider the story you are telling yourself.
- Engage in positive self-talk.
- Make a choice about how to respond.
- Look for positive emotions.

### **e. Healthy activities that help you regulate your emotions**

Some people fail to regulate their emotions. The healthy activities that help to regulate emotions include talking with friend, exercising, writing in a journal, meditation, therapy, taking care of yourself when physically ill, getting adequate sleep, paying attention to negative thoughts that occur before or after strong emotions.

### **f. How do you teach emotional regulation?**

You can help your children regulate their emotions by coaching them to slow down and calmly respond to situations rather than being impulsive. Patience and positive feedback from the parents are important. With support and guidance, the child will gradually learn to handle challenges on their own.

## **5.2.2. Behavioral self-regulation**

### **a. Meaning of behavioral self-regulation**

Behavioral self-regulation refers to one's ability to resist using unhealthy behaviors to regulate emotions. Sometimes people use behaviors like eating, drinking alcohol, or self-harm to reduce negative emotions. But these types of behaviors end up doing more harm than good and don't end up making these people happier.

Behavioral self-regulation encompasses how you respond to situations and how your actions align with your long-term goals and deepest values. For instance, you may find it challenging to get up early in the morning to jog, but you do it anyway because you want to improve your fitness and health.

### **b. Why is it important to have behavioral self-regulation skill?**

When you use unhealthy behaviors to change your emotions, you never learn how to change your emotions in healthy ways. You become reliant on that extra beer or chocolate desert to make feel better and you can even end up developing unhealthy addictions. But by learning behavioral regulation, you can reduce your reliance on these unhealthy behavioral regulations.

Behavioral self-regulation enables children to remain calm, cope with big emotions, adapt, and respond appropriately to our environment. It allows children to do well in school, with friends, and at home. It also helps children feel good about what they can handle, and it helps children feel good about themselves. Children with better behaviour regulation learn more vocabulary during speech therapy than children with poorer behaviour regulation, this is because the children with better behaviour regulation can pay attention better and persist more with challenges during speech.

### c. How can teachers support the development of behavioral self-regulation in children?

To help children develop behavioral self-regulation, teachers should do the following:

- **Manage his/her own stress.** Get your own needs met so that you can support children and be a positive role model.
- **Keep the end goal in mind.** The end goal is not to simply decrease children's challenging behavior. We want to teach skills. When children learn how to cope with stress, their behaviour will improve. You will notice that they can handle changes in their environment better and respond to stress more calmly.
- **Develop realistic expectations.** Assess children's skills to determine where they need support. Remember that younger children have less developed brains and are less able to regulate themselves. Demand from children as much as they are able to handle, keeping in mind that success leads to more success.
- **Stay calm and model self-regulation.** Remember that when children are reacting in the moment, they are in survival mode. Their downstairs brains are in full swing. Do not try to talk to them because they cannot respond to logic or reason. Instead, stay calm, show empathy, help them become self-aware, and guide them through sensory experiences and calming strategies.
- **Be supportive and encouraging.** Help children feel cared for, valued, and understood as they learn to regulate. Show genuine interest and engage with them as a coach and mentor.
- **Ensure that children's resource pool for regulation is regularly replenished.** Sleep, a balanced diet, and regular exercise are essential. Help children plan for activities they enjoy and in which they do well.
- **Reduce unnecessary demands.** Review children's routines to make sure they are not overloaded. Too many responsibilities will increase stress and decrease children's energy levels to regulate.
- **Provide structure and consistency.** Let children know what to expect and what is expected of them. Predictability helps to decrease stress.
- **Collaborate and make learning about regulation fun.** Be creative when helping children develop, practice, and adapt coping strategies toward regulation. Listen to their ideas. Talk about 'learning to regulate' in ways they can understand.
- **Expand their vocabulary.** Talk to children about their feelings. Teach them about their resource pool.

- **Enhance their self-awareness to help them self-monitor.** Help children rate their emotions and energy. Help them identify strategies to calm and ways to refill their resource pool.
- **Help children identify opportunities to practice their skills.** Start by practicing in moments of calm. Once mastered, they will be more able to apply these skills during increasingly challenging situations.
- **Give immediate and specific feedback.** Focus on effort over result. Reframe failures as opportunities for learning and growth. Make a plan for how to handle the next challenge.
- **Use rewards, positive reinforcement, and praise.** Rewards can include common everyday privileges like screen time, internet, video games, going to a friend's house or special privileges such as movies, activities, buying an item. Help motivate children to learn and practice regulation. Celebrate small successes.



### Application activity 5.2

Assess the role of emotional self-regulation and behavioral self-regulation to learning.

## 5.3. Early approaches of learning 'Cognitive Self-Regulation (Executive Functioning)



### Learning Activity 5.3

Using internet and other books from the library and describe cognitive self-regulation.

### 5.3.1. Meaning of cognitive self-regulation

**Cognitive self-regulation** is the ability to control and sustain thinking and attention, and resist distraction. Cognitive self-regulation skills are also known as executive functioning. These skills include the ability to maintain attention, control impulses, and think in flexible ways. Another related skill is working memory, the ability to hold information in mind and use it to perform tasks. Executive functioning skills begin to emerge in the infant and toddler years and develop even more in the preschool years.

Cognitive self-regulation involves the development of a set of constructive behaviors that affect one's use of cognitive abilities to integrate learning processes. These processes are planned and adapted to support the pursuit of personal goals in changing environments.

### **Examples of cognitive self-regulation:**

Paying and maintaining their attention. Directing focus and resisting distraction. Becoming and remaining engaged in activities. Being thoughtful and planful before acting.

Activities that cultivate mental growth include reading, doing challenging puzzles, listening to podcasts, learning a new language or musical instrument, trying a new hobby, or teaching and tutoring others. Cognitive self-care also involves paying attention to how we think about ourselves and others

### **5.3.2. Importance of cognitive self-regulation**

Cognitive self-regulation skills are important because they enable children to:

- Regulate reactions based on negative emotions such as frustration, anger, and embarrassment.
- To calm down when something exciting or upsetting happens.
- To focus on a task (to focus on what is most important, and filter out what is less important)
- To control their impulses
- To be thoughtful and planful before acting
- To become and remain engaged in activities
- To improve memory (store and retrieve informatin)
- To work well at school
- To set their learning goals (having them pursue goals that are specific and close at hand, and providing them with information showing that goals are challenging but attainable)
- To socialize with others
- To achive their goals and expectations

### **5.3.3. How to improve cognitive self-regulation?**

Teachers should involve children different activities that require them move, dance, write, be aware of body sensations, do physical exercises, relax, express themselves, do music, do art, self-talk, sing various songs, listen to stories, watch movies/videos, various games.

Teachers should make learning environment feel inviting and welcoming without encouraging off-task behaviors. Ensure optimal temperatures, lighting and noise levels. Use walls and dividers to minimize distractions and help kids focus on their tasks.

Children need their families' support to build cognitive self-regulation/executive function skills like focusing, maintaining attention, and controlling impulses by allowing them to use strategies like explore research, home visiting, and availing various resources to play with.

Students who are emotionally, cognitively self-regulated, are the ones who think critically before they react in different situations. They are able to manage and control their impulses and they make proper plans of their learning, hence, leading to good learning outcomes. To promote cognitive, behavioral and emotional self-regulation skills in children, parents and teachers should make learning environment feel inviting and welcoming.



### Application activity 5.3

Explain how cognitive self-regulation contributes to children's learning.

## 5.4. Initiative, Curiosity and Creativity



### Learning Activity 5.4

Using internet and other books from the library and find the meaning of initiative, curiosity and creativity in students' learning.

### 5.4.1. Initiative

#### a. Definition

Initiative is the ability to be resourceful and work without always being told what to do. An initiative is the first in a series of actions. Initiative can also mean a personal quality that shows a willingness to get things done and take responsibility. It is the start of something, with the hope that it will continue.

It requires resilience and determination. People who show initiative demonstrate they can think for themselves and take action when necessary. It means using your head, and having the drive to achieve.

Student initiatives are limited-duration projects led by one or more students in a variety of fields such as culture, education, sport, the environment, solidarity, health, civic engagement or the fight against discrimination.

Initiative at the workplace is the ability to seize the potential of an idea and take action without direction from someone else. Individuals showing initiative can create or control a situation by causing something to happen rather than responding to it after it has happened.

**b. Ways that teachers can use to promote initiative in students**

- Teachers should be role model in taking initiative (learners learn more from their teachers).
- Teachers should tie their lessons to the goal (in school and workplace, goals encourage people to take initiative).
- Teachers should incorporate group work activities in their lessons.
- Teachers should let their students work independently/let student try to things by themselves.
- Teachers should help theirs students stay productive and be productive.
- Teachers should encourage their students to discover outside connections.
- Teachers should encourage activities such as sports, exercises, music and art (these activities help students learn how to work with others, build creative thinking skills, develop interests outside of school, promote self-expression and help students discover new abilities)
- Activities such as sports, exercise classes, music, and art are good ways for your child to learn how to work with others, build creative thinking skills and develop interests outside of school. These types of activities promote self expression, and children can often discover new abilities.
- Teachers should help students take responsibility for their learning through setting goals goals because when students set goals and achieve those goals, they build self-confidence and become more willing to try again.
- Teachers should praise the efforts that students.
- Teachers should extra work (homework, project, presentation, performance) to students to stimulate their initiative.
- Teachers should complement more the endeavor not what has been done.
- Teachers should let their students think what needs to happen.
- Teachers should involve their students in classroom discussions.
- Encourage students to join clubs, teams or organizations like sports, band, choir, theatre, debate, competitions.

### **c. Importance of initiative in learning**

- With initiative students do things without being asked or told, solve problems that others may not have noticed needed solving, go out of their way to continue learning and growing, they find what they need to know, they take advantage of opportunities that others pass by.
- Initiative enables students **to be resourceful**. It helps students have resilience and determination.
- People who show initiative demonstrate that they can think for themselves and take action when necessary (means using their head and having the drive to achieve).

## **5.4.2. Curiosity**

### **a. Definition**

Curiosity is described as a natural interest that humans have in the world around them. It is also seen as a strong desire to know or learn something. A curious person is the one who has a strong desire to learn or know something. Cultural context plays a large part in nurturing children's curiosity.

### **b. Importance of curiosity in learning**

- Curiosity is a key ingredient of learning. It leads to knowledge but also to the ability to make connections among various pieces of information.
- Curiosity is an important condition for language learning and plays a significant role in learner engagement.
- People are better at learning information they are curious about.
- Curiosity prepares the brain for learning and makes subsequent learning more enjoyable and rewarding.
- Curiosity is linked so closely with success because it drives students into the unknown, which is where they make discoveries, develop relationships, uncover opportunities, and experience growth.
- Curiosity leads to better academic achievement.
- Curiosity is a response to uncertainty, and so creating uncertainty that learners want to resolve.
- Curiosity always keeps children from being bored. Instead of waiting for an activity to come along, a curious child will actively investigate and come up with their own activity ideas.
- Curious children develop a continuous stream of active learning and play.
- Curiosity encourages children to follow their passions.

- Curiosity is the force that creates new ideas and leads children to take risks so that they can ultimately create their own.
- Someone who's intellectually curious will also have better problem-solving skills. As a result, they can make better decisions and constantly learn from every problem.
- Intellectual curiosity can also help children approach situations with more creativity.
- Curiosity makes students' mind active instead of passive
- Curious students always ask questions and search for answers. Their minds are always active. Since the mind is like a muscle which becomes stronger through continual exercise, the mental exercise caused by curiosity makes students' mind stronger through continual exercise.
- Makes children's mind observant of new ideas When they are curious about something, their mind expects and anticipates new ideas related to the subject.
- Curiosity opens up new worlds and possibilities (by being curious students will be able to see new worlds and possibilities that are normally not visible).

### **c. Tips to promote curiosity in learning**

- Use activities which require learners to predict, guess, solve problems, or explore big questions.
- Encourage questions, finding media that stimulates curiosity, and helping children find credible sources to build their knowledge.
- Children's interest should be acknowledged and encouraged to support future learning.
- Provide materials that allow for open-ended play and inquiry-based learning.
- Give children enough time to investigate and tinker.
- Let students explore materials of interest to them and support them as they research and experiment.
- Let children learn through trial and error (don't find a solution before they try).
- Let children be children (Let them be active. Join them when you can and watch as they do activities that lead to new discoveries and prompt even more questions that continue to move the learning process forward.
- Focus on questions, not answer.

- To model curiosity (curiosity can be refined through observation and practice).
- Reward curiosity (motivate students who show curiosity in their learning).

### 5.4.3. Creativity

#### a. Definition

Creativity is the interaction between the learning environment, both physical and social, the attitudes and attributes of both teachers and students, and a clear problem-solving process which produces a perceptible product (that can be an idea or a process as well as a tangible physical object). Creative approaches are concerned with a holistic approach to education, focusing upon the learner becoming part of a professional community, involving the dimensions of knowledge, performance and identity formation.

#### b. Importance of creativity in learning

- Creativity can provide a place for students to express thoughts and feelings,
- Creativity helps students explore their inner world, develop greater self-awareness, and cope with stress.
- It involves all of the students' senses and creates new knowledge that didn't exist before.
- Students of all ages need to learn by creating.
- It helps students to synthesize information and bring joy and meaning into their educational experience.
- Creativity enables students to generate new or innovative ideas.
- Creativity gives students freedom to explore their surroundings and learn from them
- Creativity allows students to view and solve problems more openly and with innovation, it opens the students' mind.
- Creativity promotes higher-order cognitive skills like problem solving, critical thinking, making connections between subjects.
- Creativity motivates students to learn (Students are most motivated to learn when certain factors are present. They're able to tie their learning to their personal interests, they have a sense of autonomy and control over their task, and they feel competent in the work they're doing).

### c. Common characteristics of a creative person

Some common characteristics of a creative person include the following:

- **Flexible:** Flexibility brings willingness to creative people to try new ideas and experiences. Flexibility also enables creative people to change their minds about ideas, which make them more willing to admit when they are wrong.
- **Playful:** Creative people are willing to play with various ideas until they find the right one. The sense of playfulness means that they have fun with process rather than taking it seriously (they do not put pressure on themselves to get it right the first time).
- **Open mind:** An open mind person is willing to hear and try new ideas. When collaborating with others, creative people want to hear all the possibilities and explore them further.
- **Sensitive:** sensitive people are more approachable by others and willing listen to their thoughts or feelings.
- **Independent:** Working independently allows creative people to embrace their personal freedom. They can make their own decisions on how to do things, without instruction or demands from others.
- **Intuition:** An intuitive person makes decisions based on feelings. Creative people trust in themselves to follow their hearts.
- **Risk-taker:** Creative people are willing to take on the risks associated with trying new ideas.
- **Curious:** Creative person enjoys learning new things, so, his/her free time may include reading books, watching videos about topics he/she finds interesting.

### d. Ways to encourage creativity in the classroom

- **Choose a flexible classroom layout:** Teacher should create a collaborative learning layouts to keep the creativity flowing between different activities.
- **Create a classroom library:** Teachers to encourage reading by giving your students easy access to interesting books appropriate to their grade level. Add a creative, collaborative element by having your class help create recommendations for readers who like different genres, or help organize and categorize your classroom library.
- **Visualize ideas and goals:** Empower students to set their own goals and map out ideas in their own original ways.
- **Create opportunities for reflection:** Reflective activities help students absorb information more deeply, enhancing their creative and contextual understanding of new concepts. Display reflective learning resources in your classroom that students can focus on.

- **Take your teaching outside:** Teachers to dedicate some of the day to hosting an outdoor classroom. Choose active, exploratory activities you can't do indoors. Consider setting up an outdoor project like a vegetable garden as well.
- **Introduce multimedia learning materials:** Go beyond textbooks and worksheets and work with a variety of learning materials including ICT tools.
- **Support hands-on learning:** Hands-on learning provides students with opportunities to express new ideas, think critically and voice their opinions, ultimately engaging them on a deeper level.
- **Explore different cultures:** Developing students' ability to consider multiple perspectives is an important part of thinking creatively. Celebrate cultural differences while learning from them. Invite members of your class to bring their own cultural context into tasks and discussions.
- **Incorporate humor into your classroom:** Comedy requires creativity, and inviting tasteful humor into the school day can help create a positive environment where outside-the-box thinking can flourish. Encourage your kids to think of relevant pop culture references, puns and jokes for a light-hearted dose of classroom cleverness.
- **Encourage more colours:** Colour in the classroom can have value beyond elementary school. Encourage students to color-coordinate their school subjects and use colour when note-taking and studying. Use color around the room as well with vibrant posters or themed corners.
- **Team-building exercises:** cooperative strategies that allow peers to think, communicate and create together.
- **Reward and recognition:** Rewarding student accomplishments with visual recognition is a great motivator and can instil a sense of pride in all their hard work. Create certificates that praise all types of creative efforts, not just the successes.
- **Celebrate class wins with ceremonies:** Allow students to plan victory ceremonies when they collectively meet class goals.

Note that initiative, curiosity and creativity influence greatly students' learning. Curious and creative are the ones who academically perform better in the classroom. When they are engaged in creative activities, they develop competences such as critical thinking, problem solving, communication, lifelong learning, etc. which will make them responsible and productive citizens. Furthermore, curiosity leads to initiative of creating learning. To make our students responsible, curious and creative, teachers must create a conducive learning environment that facilitates them to do so.



## Application activity 5.4

Justify the contribution of initiative, curiosity, and creativity to students' learning

## 5.5. Psychologists and learning theories: Socrates and Plato



### Learning Activity 5.5

Using internet and other books from the library and describe the contribution of Socrates and Plato to education.

### 5.5.1. Socrates (469-399 BC)

#### a. Contributions of Socrates on learning

Socrates is often considered to be one of the founders of western philosophy. He developed a Socratic or dialectical method of philosophy which is based on persistent questioning and the belief that the life which is not examined is not worth living.

**Some key questions and answers that Socrates posed related to teaching and learning.**

- i) **What is knowledge?** Socrates categorized knowledge into trivial and important. For him, trivial knowledge doesn't provide the possessor with any useful expertise or wisdom while important knowledge relates to ethic and morals and can be defined by how best to live one's life.
- ii) **Why do we need to learn?** Even though Socrates believed that goodness, truth, ethical and moral instincts are inherited in everyone; they can only be brought to the surface through learning.
- iii) **How do we learn?** Socrates described learning as the search of truth. For him, learning will only occur as the result of questioning and interpreting the wisdom of others and when one comes to recognize his/her own ignorance and faults.
- iv) **Who do we learn from?** Socrates didn't believe that any person or any one particular school of thoughts had the wisdom or legitimate authority to teach things. However, he argued that individuals are not sufficient, and that other people are necessary to share the experience and wisdom from which learning can flourish.

- v) **Where do we learn?** Socrates questioned the established idea that learning could only take place in educational establishments and advocated that learning should take place wherever and whenever people meet.
- vi) **When do we learn?** According to Socrates, learning occurs whenever two or more people have a meaningful conversation/dialogue and when one person is willing to acknowledge their own faults, weaknesses and negative tendencies.

Keep in mind that the Socratic approach of teaching relies on the teacher posing leading questions and assisting the student in making discoveries. The communication between the teacher and the student is its cornerstone. Apart from Socratic method/technique of teaching, Socrates put forward different theories related to learning. Some of them are briefly described in below:

### b. Theories

- **Theory of Learning: According to this view, Socrates** demonstrated that learning is the pursuit of truth in all things, and it happens after questioning and analysing the knowledge of others. For him, acquiring Skills and knowledge involves analysing the ideas of others, testing or examining the knowledge of others, observing the lives of others. Furthermore, people learn from one another in collaborative manner.
- **Theory of Transmission:** According to this theory, knowledge, skills and attitudes should be transmitted through open dialogue between teachers and students. Socrates is widely regarded as one of the greatest teachers of all times due to his teaching method that facilitates discoveries.
- **Theory of Society:** Socrates indicated that society plays a big role in imparting knowledge, skills and attitudes in people through different functions that are carried out in society. For society is composed of distinct classes like builders, clothiers, farmers...in which people acquire all genuine necessities of life. This means that society teaches through various fields of functions.
- **Theory of Opportunity:** According to Socrates, the practical knowledge that experts had in their respective fields was trivial and unimportant to anyone but themselves. He wanted to educate, challenge, question and debate men of ignorance mistaking themselves as knowledgeable, and by doing so, to promote their intellectual and moral improvement.

## 5.5.2. Plato (427-327 BC)

### a. Plato's Allegory of the Cave

Plato was a student of Socrates, and his early writings were influenced by those of his mentor and focused on the search for the definitions of moral values such as virtue and justice.

Plato described everything that our senses perceive in the material world as limited to mere shadows of reality and held that the real truth lies within. He used the Allegory of the cave to explain this idea. Plato explained the idea of the Allegory of the cave in four phases:

- 1. Imagine you are imposed in the cave.** You are shackled to a wall and can only see the shadows of objects. These shadows are the only things that you have ever seen and that all you have ever thought about. They present your current reality.
- 2. Suppose you are released from shackles and allowed to roam freely around the cave.** You now begin to see things as they really are and begin to understand the origins of some shadows. You begin to question your beliefs about what is real.
- 3. Eventually you are allowed out of the cave** where you start to see the fullness of the reality. You realize the errors in your beliefs.
- 4. You re-enter the cave** and try to convince your former inmates that what they accept as truth is only an illusion. Your arguments are only met with ridicule and rejection by others less enlightened than you. You either succumb to ridicule and go back to your original beliefs about reality or persevere with the truth.

The Allegory of the cave highlights the Plato's beliefs in the separation of two distinct worlds: **one of appearance and one of reality**, and his belief that knowledge and truth were to be found within someone.

From Plato's allegory of the cave, we learn that the cave symbolizes the inability to understand the true nature of the reality and see beyond the physical world. The cave also was used as a symbolic representation of how human beings live in the world. The key life lesson from Plato's allegory of the cave is to question every assumption one has about the reality he/she calls real. This is a powerful skill of thinking, discovering own unique solutions to the problem. Plato is inviting teachers to focus on the abstract realm of idea. He invites us to promote discussion on the appearances of things we see in real world. The cave also reminds us that we should promote critical and analytical thinking in students.

**NB.** Apart from the allegory of the cave, there are other Plato's ideas that contributed all to education. Some of them are summarized in the paragraphs below.

#### **b. Other Plato's contributions**

- According to Plato, a just society always tries to give the best education to all of its members in accordance with their abilities

- Plato contributed a lot in the form of ideas and it inspired his follower to find new ways for education and training of the children his philosophy of education influenced the developments of science and mathematics in centuries to come.
- Plato shows his ability of writing in different fields; ethics, music, drama, poetry, metaphysics, dance, architecture which are the ideal forms of Government
- Education for All Plato want every boy and girl educated to it limit
- State Education: according to Plato, education should be provided by the state not by parents.
- Plato talked about the organization and Curriculum. According to him, curriculum was consisting of gymnastic and music, where in gymnastic include physical training and music used in broad term for dram, history, oratory and music in real term.
- He determined different stages for the organization and curriculum;
  - i) Elementary School: Co-education at elementary level and teach them mathematics, poetry, music and literature till the age of eighteen years.
  - ii) Military Training: After elementary education two years of Physical education should be given to them and select best of them for higher education; to prepare for the future guardians of the state.
  - iii) Higher Education: Higher education should be given from twenty to thirty-five years of age. He will study the subjects at this stage mathematics, literature and philosophy.

In addition, Plato proposed the stages of education. According to him, education of the child should start at the age of seven years stressing that before this age the child should stay with their mothers or elders and learn moral education from them. After the age of six years both girls and boys should be separated, and boys should play with boys and girls with girls, and they should be taught the use of different arms to both sexes. This stage goes up to the age of seventeen years. During these years they should teach them music and early education. After the age of seventeen years the youth should be brought to battle field to learn real life experiences.

The fourth stage starts at the age of twenty-five to thirty years and in this age they get the training of Mathematical calculation and last for another ten years, after the completion the selected one's are admitted in the study of dialect. During fifth stage they study dialect for another five years and after that, at the sixth stage one is ready to become a ruler and philosopher and the one enters in practical life.

### c. Women education

Plato also emphasises on **women education**, he considers the same kind of education for women. Women should have the same physical and educational training; they should know the art of war. The main aim of Plato was that each member of society should undertake his work and responsibilities. Plato believed that women are equal to men and that, although some women are physically smaller or weak, some women are physically equal to men therefore those women who are physically strong should be allowed to learn the same skills that men do.

In his book *Republic* Plato described how male and female receive the same education and be given the same duties in society as given to the male member. These people are the ones who will be in charge his republic which would be an ideal society, where philosophers are kings. In other words, who know what is good for the people and for the mankind and take their decisions based on that knowledge.

### d. Teaching methods

Plato recommended play method at elementary level; student should learn by doing. And when he reached the higher level of education, his reason would be trained in the processes of thinking and abstracting. Plato wants motivation and interest in learning. He is against the use of force in education. Plato stressed that the most effective kind of education is that a child should play amongst lovely things. He wants a place where children love to go and stay there, and they play with things which enhance their education by playing.



#### Application activity 5.5

Make a summary of ideas related to education of Socrates and Plato.

## 5.6. Psychologists and learning theories' Edward Lee Thorndike, John Watson and Ebbinghaus



#### Learning Activity 5.6

Using internet and other books from the library, find a brief description of the theories of the psychologists such as Thorndike, John Watson and Ebbinghaus

## 5.6.1. Edward Lee Thorndike

### a. Trial and error learning

Trial and error theory of learning was put forward by a famous psychologist Edward Lee Thorndike. THORNDIKE (1874-1949). He conducted different experiments on chicken, rats, and cats. Thorndike explained this theory and he arrived at it after several experiments. According to him learning takes place through a process of approximation and correction. A person makes a few trials some responses do not give satisfaction to the individual, but he goes on making further trial till he gets satisfactory response.

### Cat experiment by Thorndike

Thorndike put a cat in a puzzle-box with iron bars on the sides, and a door which could be opened by catching and pulling a loop which was bending above in the center of the box. The cat, hungry for 24 hours, had the motivation of eating fish outside the box. But how to open the door? The cat made several unsuccessful attempts of biting the irons, striking head against these, and finally it was successful in pulling the loop. The same experiment was repeated several times and it was found that the cat in each successive attempt took less time in reaching the goal. It took 160 seconds for the first successful attempt, but a few seconds for the last trial.

### b. The principles underpinning Thorndike's work

- Learning requires the teachers to stimulate the learner by rewarding successful practices.
- A series of stimulus-reward connections can be linked together if they belong to the same action.
- Intelligence is a function of a number of connection learned.
- Connections become strengthened with practice and weakened when practice is discontinued.
- Transfer of learning occurs because of previously encountered situations.

## 5.6.2. John Watson

### a. Bibliography and experiment

John Broadus Watson (1878-1958) was an American psychologist. He popularized the scientist theory of behaviourism establishing as a psychological school. He is considered as the father of modern psychology. Watson is known as one of the founders of behaviourism which focused on observable and measurable behaviors in people and animals alike. He believed that only behaviors which could be observed by the human eye were valid in scientific study of psychology.

## Watson's experiment

Watson is well known for his experiments on classical aversive conditioning which involved an unpleasant stimulus to create a learned fear response. John Watson taught Little Albert to fear a white rat. He conditioned Little Albert by pairing a loud noise with the presentation of the white rat. After one week, Watson reintroduced the rat to Little Albert, and even without the loud noise, Albert cried and crawled away. Through Watson's experiment, Little Albert learned to fear white rats. The infant also feared similar furry white objects.

While this may be one of psychology's most famous studies, many critics consider Watson's experiment unethical. Mainly because of the harm done to Little Albert, considering he was very young at the time of the experiment, and the failure to reverse the fear developed in Little Albert.

**Note that** Watson's Little Albert experiment showed how people can acquire fear and learn complex behaviors by controlling one's environment. For him, one's mind should focus on measuring behaviour that be directly observed. He added that psychology is purely objective in predicting and manipulating behavior. Watson furthermore insisted that parents and teachers are entirely responsible for their children's behaviour because a child's learns in the environment he/she is reared. He also adds that we can control stimulus-response associations to shape a child's behaviour and development.

**John B. Watson**, who is generally credited as the first behaviourist, argued that the inner experiences that were the focus of psychology could not be properly studied as they were not observable. Instead, he turned to laboratory experimentation.

### b. Legacy of John Watson in Education

- He founded behaviourism psychological school.
- Through his work, John Watson contributed to the study of behaviour in which he claimed that psychology is a science of behavior.
- He introduced behaviourist principles that paved the way for other psychologists even in educational psychology which focuses on learning, teaching and other psychological aspects in the classroom settings.
- His ideas on behaviourism dominated psychology.
- Watson helped to establish learning as a key area for research and application.
- His legacy helped establish psychology as a scientific discipline through objective methods and experimentation.
- His theory of behaviorism and the introduction of behaviorist principles prepared psychologists and educators for the work of other behaviorists in subsequent decades.

John Watson revealed that if teachers provide positive reinforcement, or rewards, whenever students perform a desired behavior, they will learn to perform the behaviour on their own. He focuses on the idea that all behaviors are learned through interaction with the environment (meaning that behaviors are learned from the environment) and innate or inherited factors have very little influence on behavior.

The behavioral approach suggests that the keys to understanding development are observable behaviour and external stimuli in the environment.

We can conclude by saying that **John B. Watson**, who is generally credited as the first behaviourist, argued that the inner experiences that were the focus of psychology could not be properly studied as they were not observable. Instead, he turned to laboratory experimentation. The result was the generation of the stimulus-response model. In this, the environment is seen as providing stimuli to which individuals develop responses.

### **c. Three key assumptions underpin this view**

- Observable behaviours rather than internal thought processes are the focus of study. In particular, learning is manifested by a change in behaviour.
- The environment shapes one's behaviour; what one learns is determined by the elements in the environment, not by the individual learner.
- The principles of contiguity (how close in time two events must be for a bond to be formed) and reinforcement (any means of increasing the likelihood that an event will be repeated) are central to explaining the learning process. There are two main theories involved: Classical conditioning and operant conditioning.

## **5.6.3. Ebbinghaus**

### **a. Bibliography and Forgetting curve**

Herman Ebbinghaus (1850-1909) was a German psychologist who pioneered the experimental study of memory, and he is known for his discovery of forgetting curve.

**Forgetting curve** is the theory that newly acquired information is forgotten with time. This is considered as a basic cognitive characteristic of humans whereby our brains eventually discard information that is not retrieved or revealed. The theory suggests that people tend to continually halve their memory of newly learned knowledge in a matter of days or weeks unless they actively reviewed the learned material.

### **Illustrative examples of forgetting curve theory:**

- **Strength of memory:** Forgetting curve differs by person, topic and learning experiences. Vivid learning experiences may be fully retained and regularly access these memories. Less interesting memories aren't recalled and begin to get lost within few seconds. The degree to which a new memory is retained is known as strength of memory.
- **Spaced practice/spacing effect:** Is a process of studying a topic repeatedly with a short span of time usually a day between each repetition. It is designed to strengthen memory and overcome forgetting curve so that knowledge becomes more and more durable.
- **Cramming:** Is the process of studying just before information is acquired. Clamming one to absorb information and regulate it on tests of interview but it results in a very steep forgetting as he/she tries to absorb a great deal of information in a short period of information with no reinforcement later.

**Note that** educational systems that encourage cramming tend to produce low work knowledge retention.

#### **a. Strategies that promote good memory in students**

Some of strategies that teachers and parents can use to help students improve their memory include the following:

##### **– Asking Questions:**

In order to remember the study material, students should first understand the subject. Parents and teachers should encourage students to develop curiosity and ask questions, which would help them to develop a better comprehension of the subject. It will also help them to think critically and develop problem-solving skills.

##### **– Combining Learning with Rhymes and Songs:**

Parents can help their children to make a rhyme, poem, or song from the information they are learning. Music and patterns enable quicker grasping and retention of information. Hence, with proper implementation, songs and rhymes can help students to enhance their memory and recall.

##### **– Encouraging Active Learning:**

Parents and teachers should regularly discuss with their children about different topics related to their curriculum. This will encourage students to actively participate in their studies and will help them to retain information for a longer period of time. As a result, students will be able to recall important topics during examinations, which, in turn, will help them to develop critical thinking skills while improving memory power.

– **Visual materials:**

Pictures, videos, graphics, and so on ignite interest about studies among students. This can help them to learn new information effectively. Creating interesting study exercises with small flash cards that include images, texts, and numbers can help in enhancing students' memory, and encourage them to participate actively in studies.

– **Using Real Life Examples:**

Explaining a topic by taking examples from real life can help students to understand better. Parents and teachers should ask children to explain a topic by creating their own real-life examples based on their personal experiences. This will help them to easily process and retain the information and will help students to personally connect with the subject matter.

– **Use Multisensory Experience:**

A multisensory approach can help students to enhance their memory manifolds. They can engage their senses to enhance the study experience. Reading aloud, having conversations, listening to podcasts, watching videos and images, and using other props can help them gather new information and retain old information.

– **Listing the Keywords:**

Students can make a list of various words, which can help them to build associations with various concepts related to their studies. Creating distinct associations will be helpful, as they will help students to remember the concepts easily.

**Note:** In education situation, students with good memory are the ones to academically perform well in their studies.



**Application activity 5.6**

**Question:** Answer by **True** if the statement is correct and by **False** if the statement is wrong

- a) Rote learning facilitates the retention of information for long time.
- b) John Watson is considered as the founder of behavioral theories of learning.
- c) Trial and error learning is the result of Ebbinghaus experiment.

- d) One of strategies that teachers can use help students improve their memory is to emphasize on the main aspects of the lesson while teaching.
- e) According to Thorndike experiment, students should be actively engaged so as to get reward.

## 5.7. Psychologists and learning theories ‘Skinner and Piaget’

### Learning Activity 5.7



Using internet and other books from the library, find a brief description of the theories of the psychologists such as Skinner and Jean Piaget.

### 5.7.1. Skinner

#### a. Bibliography and experiment

Burrhus Frederic Skinner (1904-1990) was an American psychologist known for his impact on behaviourism. Skinner’s most notable discovery/contribution to the field of psychology is ‘The operant conditioning or Skinner’s theory of learning’. This theory is described in the paragraphs below.

#### b. Operant conditioning

Operant conditioning or instrumental conditioning is a method of learning that occurs through rewards and punishments for behavior. Through operant conditioning, an association is made between a behaviour and a consequence for that behavior. Operant conditioning stems from the work of B.F. Skinner and involves the use of reinforcement to encourage behaviors. Responses are voluntary or chosen in operant conditioning. Operant conditioning is a learning process in which responses are controlled by consequences. The likelihood of a certain response occurring is either increased or decreased due to either a reinforcement or a punishment consequence.

Reinforcement helps to increase a behavior, while a punishment helps to decrease a behavior. The term operant conditioning was coined by a behaviourist, B.F. Skinner. Skinner conducted experiments with rats using a device called the Skinner box. The box was a cage set up so the rats could automatically get a food reward if they stepped on a lever. The lever caused food to be released.

### c. Role of reinforcement and punishment in operant conditioning

From the above experiments, Skinner observed how reinforcement could lead to increases in behaviors whereas punishment would result in decreases in behaviors.

#### Reinforcement

Reinforcement is a consequence that increases the likelihood a response will occur. If you are using reinforcement, you are trying to increase a behavior. There are two types of reinforcement:

- **Positive reinforcement:** Positive reinforcement means adding a stimulus. Thus, positive reinforcement is the addition of a good stimulus after a response in order to encourage the response to continue. An example of this would be giving someone praise after a desired behaviour is displayed.
- **Negative reinforcement:** Is the removal of an undesirable stimulus after a response so that the response will occur more often. An example of this would be fastening your seatbelt in a car so the beeping sound will stop. Since the undesirable stimulus is removed when you fasten your seatbelt, you are encouraged to fasten your seatbelt. Negative reinforcement is often confused with punishment because of its name. However, negative reinforcement involves removing a negative consequence to increase a behavior, while punishment seeks to decrease a behavior.

#### Punishment

Punishment is a consequence that decreases the likelihood a response will occur. If you are using punishment, you are trying to decrease a behavior. There are two types of punishment:

- **Positive punishment:** Is the addition of an undesirable stimulus after a response so that the response will occur less or stop. An example would be to give someone extra work for misbehaving.
- **Negative punishment:** Is the removal of a pleasing stimulus after a response so that the response will occur less or stop. An example would be taking away television or video games from a child for misbehaving so he/she will stop misbehaving.

### d. Principles of operant conditioning.

- **The law of effect:** it states that a response that followed by satisfying or pleasant consequences (reward) tends to be repeated, while a response followed by unpleasant consequence (punishment) tend not to be repeated.

- **Law of exercise:** “law of use and disuse”. It states that the more S-R connection is used, the stronger it will become. The less it is used, the weaker it will be (law of disuse).
- **The law of readiness:** when an organism is in a state in which S-R connections are ready to conduct learning, learning is satisfying otherwise it is annoying.
- **The law of similarity of stimuli:** The more similar the stimuli are, the greater the chance that correct response will be supplied by the organism.
- **The law of contiguity/ immediacy:** It states that the reinforcement should be very close to when the response is made.
- **The law of spacing:** as the organism needs time for the new learning to settle and be meaningful, the more spaced-out stimuli are in terms of time, the better the responses are likely to be in terms of correctness.

### 5.7.2. Jean Piaget

#### a. Bibliography

Jean Piaget (1896-1980) was a Swiss psychologist. He is famous for the **theory of cognitive development** which looks at how children develop intellectually throughout the course of childhood. According to Piaget, cognitive development in children is not only related to acquiring knowledge, but children also need to build/develop a mental model of their surroundings.

Piaget mentioned that children progress through a series of four key stages of cognitive development. For him, each stage is marked by shifts in how kids understand the world. Piaget believed that children are like little scientists and that they actively try to explore and make sense of the world around them. Through his observations of his own children, Piaget developed a stage theory of intellectual development that included four distinct stages.

#### b. Stages of cognitive development

- **The sensorimotor stage (from birth to age 2):** During this stage, infants and toddlers acquire knowledge through sensory experiences and manipulating objects.
- **The preoperational stage (from age 2 to about age 7):** At this stage, kids learn through pretend play but still struggle with logic and taking the point of view of other people.
- **The concrete operational stage (from age 7 to 11):** Kids at this point of development begin to think more logically, but their thinking can also be very rigid. They tend to struggle with abstract and hypothetical concepts.

- **The formal operational stage**, which begins in adolescence and spans into adulthood. This final stage of Piaget's theory involves an increase in logic, the ability to use deductive reasoning, and an understanding of abstract ideas.

Based on the above theory, we advise teachers and parents that when preparing teaching activities and materials to students, they should bear in mind their intellectual capacities so that everyone can benefit from teaching and learning process.



### Application activity 5.7

Describe the legacy of Skinner and Piaget to Education.

## 5.8 End unit assessment




### End unit assessment

1. Answer by **True** if the statement is correct and by **False** if the statement is wrong.
  - i) The Allegory of the cave theory is the work of Socrates.
  - ii) Learning takes place only in schools.
  - iii) Self-regulation skills may lead to excellent performance.
  - iv) Reward in classroom increases the likelihood of the occurrence of behavior.
  - v) John Watson is considered as the founder of behaviorism.
2. Examine the contribution of Thorndike and Socrates to learning psychology.
3. Propose strategies that can promote emotional self-regulation and initiative in children. Propose at least three on each.

# Unit 6

## TYPES OF BEHAVIORAL LEARNING

 **Key unit competence:** Compare and contrast types of behavioural learning.



### Introductory activity

In previous units, you have learnt that learning is a process that leads to a permanent change in behavior, which occurs as a result of experience. And the behavioral learning theories assume that learning takes place as the result of responses to external events. For example, if a song you remember lovingly from your childhood gets repeatedly paired with a brand name, over time your warm memories about the tune will influence you to be interested to the advertised product.

- a) Can you think of any advertisements that feature a favorite song from your childhood years?
- b) After a certain moment of the advertisement, what could happen if that advertised product is paired to an unfavorable song?

How people learn and behave is described by the behavioural learning theory, sometimes known as behaviourism. This idea is used by educators and leaders to encourage positive behaviour in a variety of contexts, including the workplace and the community. Understanding diverse behavioural learning theories can aid in a better understanding of how people interact with one another in a variety of settings, including the workplace, the market, or a store, with customers, managers, or community leaders.

## 6.1. Classical conditioning: Conditioned and unconditioned stimulus

### Learning Activity 6.1



When you are at school, you are used to take lunch around 12:00am. What happens if you go to the dining room, and you find that the food is not yet ready or when they have prepared delicious food you like?

#### 6.1.1. Description of classical conditioning

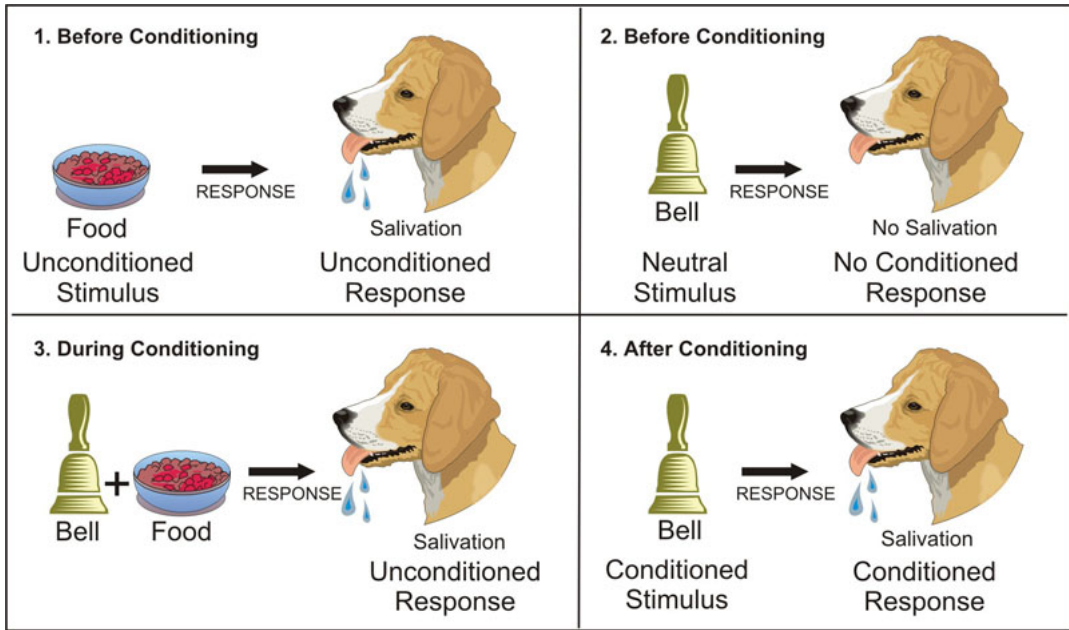
Ivan Pavlov, a Russian physiologist, conducted an experiment with salivating dogs that gave rise to classical conditioning. He trained the dogs in his experiment to connect the sound of a bell with the presence of food. He combined the neutral stimulus of a ringing bell with the naturally occurring stimulus of the smell of food. Once a connection between the two had been established, the sound of the bell might trigger a reaction by itself. When the bell rang, the dogs slobbered in response. Its fundamental tenet is that conditioning behaviors through the matching of inputs and responses is possible. Responses in classical conditioning are either biological or involuntary.

Since the bell did not cause the dogs to start salivating in the experiment mentioned above, it served as a neutral stimulus. However, the salivation response was eventually brought on by combining the bell with the stimulus of the smell of the food, which did cause the salivation response. Thus, “conditioning” was complete when the ringing of the bell could cause the dogs to salivate in anticipation of the food on its own (Slavin, 2012).

In classical conditioning, a new learnt response is created by combining two stimuli. One stimulus elicits a natural response, while the other is neutral. The neutral stimulus causes the conditioned response once the association has been learned.

#### 6.1.2. The classic experiment of classical conditioning

The three steps of classical conditioning are as follows. The stimuli and responses are described in specific scientific terminology at each stage. The steps of traditional conditioning are illustrated in the diagram below:



## Classical Conditioning

*Figure 6: Steps of traditional conditioning*

**Source:** <https://www.wattsburg.org/Unit5Learning.aspx>

### a. Conditioned, unconditioned and neutral stimulus

Without any prior conditioning or learning, an unconditioned stimulus (UCS or US) can inadvertently trigger an instinctive reaction. The unconditioned stimulus causes a reflex that causes the involuntary reaction. It's a physiologic response to this. Since these are normal bodily reactions, a person (or animal) typically has no control over this behavior. For instance, Pavlov observed that when the dogs smelled the food, they would automatically salivate. No prior knowledge was needed for this instinctive reaction. A stimulus is considered neutral (NS) when it first elicits no reaction. As an illustration, Pavlov used the sound of the bell as a neutral stimulus.

The following are some of examples of Unconditioned Stimulus in everyday lives:

- **Touching a hot iron:** Touching a hot iron makes a person withdraw a hand right away.
- **Eating:** Putting food into the mouth causes a mouth to water (salvation).
- **Hurting the foot:** Dropping a rock on a foot makes a person scream in pain.
- **Inhaling dust:** Dust entering the nose causes a person to sneeze.

## **b. Stimulus Generalization and stimulus discrimination**

**Stimulus generalization** refers to the tendency to respond to stimuli that resemble the original conditioned stimulus. Pavlov also experimented with presenting new stimuli that were similar, but not identical, to the original conditioned stimulus. For instance, if the dog had been conditioned to being scratched before the food arrived, the stimulus would be changed to being rubbed rather than scratched. He found that the dogs also salivated upon experiencing the similar stimulus, a process known as (stimulus) generalization. The ability to generalize has important evolutionary significance. If a person eats some red berries and they make him/her sick, it would be a good idea to think twice before he/she eat some purple berries. Although the berries are not exactly the same, they nevertheless are similar and may have the same negative properties.

**Stimulus discrimination** is the tendency to respond differently to stimuli that are similar but not identical. Pavlov's dogs quickly learned, for example, to salivate when they heard the specific tone that had preceded food, but not upon hearing similar tones that had never been associated with food. Discrimination is also useful — if a person does try the purple berries, and if does not make him/her sick, he/she will be able to make the distinction in the future. And he/she can learn that although two people in his/her community, may look a lot alike, they are nevertheless different people with different personalities.

## **c. Conditioned and unconditioned response**

A conditioned response (**CR**) is activated by a conditioned stimulus (**CS**) after conditioning. Before conditioning, a CS is a neutral stimulus (**NS**) that cannot elicit the target response. After being repeatedly paired with an unconditioned stimulus (**US**), the **NS** becomes a **CS** that can trigger a **CR**.

CR doesn't occur naturally. They are learned over time through associative learning using classical conditioning or operant conditioning. An unconditioned response is a natural response caused by an unconditioned stimulus.

**The following are examples of real-life conditioned responses;**

A child was held down while receiving vaccinations (Unconditioned Stimulus). He learned a paired association of a needle plus a doctor (Conditioned Stimulus) equals pain and distress (Unconditioned Response).

Being back in that situation (conditioning situation) produces distress (Conditioned Response), causing sufferers to avoid it altogether. When needle phobia is severe, patients may not seek help even in the terrible circumstances.

### 6.1.3 Basic features of the classical conditioning model of learning

- **Acquisition phase:** This is the period during which an organism learns to associate the conditioned stimulus with the unconditioned stimulus.
- **Generalization:** This is the principle by which a stimulus similar to, but not identical with, the CS, elicits a CR. The more similar a new stimulus to the original CS, the more likely it is to elicit the CR.
- **Discrimination:** The organism learns to differentiate CS with other similar stimuli.
- **Extinction:** Extinction or cessation of the CR, occurs when the CS is presented repeatedly without the UCS. Once extinguished, a CR can be reactivated in much less time than it took to acquire it in the first place.
- **Spontaneous Recovery:** A CR will sometimes reappear spontaneously after extinction.
- **Higher Order Conditioning:** With its newly acquired strength, the CS can be used to condition the same response to other stimuli.



#### Application activity 6.1

1. Compare and contrast conditioned and unconditioned stimulus.
2. Alice conditioned her sister to squirm at the sound of the word “pancake” by repeatedly tickling her after saying it. “Pancake” is now a:
  - a) Unconditioned stimulus
  - b) Unconditioned response
  - c) Neutral stimulus
  - d) Conditioned stimulus
  - e) Conditioned response
3. Explain how the processes of stimulus generalization and stimulus discrimination are considered opposites.

### 6.2. Operant conditioning: positive reinforcement and positive punishment

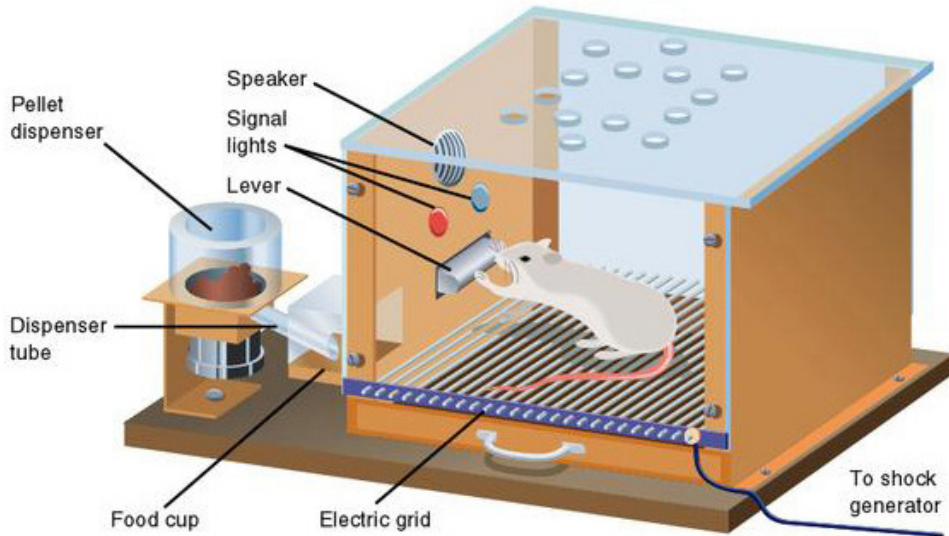


#### Learning Activity 6.2

When you are supposed to do home cleaning and you don't do it appropriately, what will happen?

## 6.2.1 Description of operant conditioning: Positive reinforcement and positive punishment

The term operant conditioning was coined by a behaviourist B.F. Skinner. Skinner conducted experiments with rats using a device called the Skinner box. The box was a cage set up so the rats could automatically get a food reward if they stepped on a lever. The lever caused food to be released.



*Figure 7: Illustration of operant conditioning*

**Source:** <https://www.simplypsychology.org/operant-conditioning.html>

Reinforced behaviors become strengthened, while punished behaviors are weakened. There are several kinds of reinforcers, and they may vary from individual to individual. Responses are voluntary or chosen in operant conditioning. The four types of reinforcement/punishment are:

- **Positive reinforcement** is the addition of a positive outcome to strengthen behavior.
- **Negative reinforcement** is the removal of a negative outcome to strengthen a behavior.
- **Positive punishment** involves taking away a desired stimulus to weaken a behavior.
- **Negative punishment** involves applying an undesirable stimulus to weaken a behavior.

## 6.2.2 Positive reinforcement

Positive reinforcement is a term coined by a famous psychologist B.F. Skinner. The concept is very well-known in the theory of Operant Conditioning. According to this theory, positive reinforcement is an extremely powerful behaviour management strategy that focuses on changing existing behaviors or creating new ones by offering a favourable stimulus like reward or praise. These rewards and praises increase the probability of the desired behavior. Positive reinforcement also involves the addition of a reinforcing stimulus following a behaviour that makes it more likely that the behaviour will occur again in the future. When a favourable outcome, event, or reward occurs after an action, that particular response or behaviour will be strengthened.

### a. Examples of Positive Reinforcement

There are many examples of positive reinforcement in action:

- A mother praising her kid for doing homework independently.
- A teacher giving free time to the students for staying quiet during the class.
- An employer giving bonus to an employee for not taking any sick leaves during the year.
- Prime parking slots being reserved in malls for those who use electric vehicles.
- Dietician giving a cheat meal for sticking to a healthy diet for an entire month.
- Brands introducing rewards programs to build customer loyalty.

### b. Uses for Positive Reinforcement

When used correctly, positive reinforcement can be very effective. It yields great results when it is used to create new behaviors or to strengthen the existing behaviors in a formal setting like a training camp or a classroom. It can be used in various settings to make desired changes to behaviour or teach new behaviors. However, positive reinforcement works best when it is planned and used deliberately.

- **At home:** Parents can use positive reinforcement to encourage kids to engage in all kinds of positive, desirable behavior. For example, a parent might use praise or other rewards to get a child to brush their teeth, get ready for bed, or clean up their room.
- **In school:** Teachers can also use positive reinforcement to help kids engage in desired classroom behavior. An example of positive reinforcement in the classroom would be praising a child for raising their hand or giving them a sticker on their reward chart for turning their homework in on time.

- **In therapy settings:** Therapists also use positive reinforcement to help teach new behaviors and coping skills. For example, positive reinforcement is commonly used as part of behaviour modification, an intervention that focuses on reducing or eliminating maladaptive behaviors.

While different strategies can be used depending on the situation, some experts suggest that positive reinforcement should be used more often than negative reinforcement or punishment.

### **c. Categories of Positive Reinforcement**

Positive reinforcements are differentiated on the basis of a positive stimulus, also known as the reinforcer. A **reinforcer** is a reward, event, or action associated with the desired behavior. The stimulus or the reinforcer, reinforces the behavior, making it more likely that the behaviour will reoccur.

These can be categorized into five kinds:

1. **Natural or Direct Reinforcers:** These types of positive reinforcers are used as a result of the desired behavior. This is essentially known as an intrinsic type of reinforcement for which the reinforcer does not have to put in much effort. For example, a student studying well for the exam to gain the teacher's attention; or a kid making their own bed to make their mom happy.
2. **Social Reinforcers:** These types of positive reinforcers are used when a child (or an adult) seeks social recognition from friends, family, and peers. Mainly, it's the acknowledgment or the approval of the desired behavior.

For example, a teacher praising a student in front of the entire class. Or a parent saying 'well done' or 'good job' when a child helps them in doing household chores.

3. **Tangible Reinforcers:** These types of positive reinforcers are physical or monetary reinforcers like cash, toys, treats, awards, bonuses, etc. These physical reinforcers are used to reinforce the desired behaviors. This is the most commonly used form of positive reinforcement. However, these kinds of reinforcers require a lot of consideration and caution, or else they may be perceived as a bribe.
4. **Token Reinforcers:** These types of positive reinforcers are tokens. They are used in the form of points and stars as rewards. Even though these have little value of their own, they can be exchanged for something of value in return. For example, a teacher can allot points for specific behaviors and later can reward the student who scores the maximum points.

**5. Activity Reinforcers:** This type is the most powerful form of positive reinforcement. The students (or adults) are allowed to participate or indulge in the activity of their choice. The activities include games, sports, screen time, playtime, etc. The promise of spending time doing their favourite activity strengthens the desired behaviors.

#### **d. Some tips to Use Positive Reinforcement**

Positive reinforcement can be a useful learning tool in a wide variety of settings. There are things that you can do to make sure that it is used effectively.

- **Be Aware of Reinforcement Timing and Use the Right Reinforcement Schedule.** Positive reinforcement is most effective when it occurs immediately after the behavior. Reinforcement should be presented enthusiastically and should occur frequently. In addition to the timing and type of reinforcement used, the presentation schedule can also play a role in the strength of the response. Schedules of reinforcement can have a powerful influence on how strong a response is and how often it occurs.
- **Deliver reinforcement quickly.** A shorter time between a behaviour and positive reinforcement makes a stronger connection.
- **Waiting risks reinforcing the wrong behaviors.** The longer the time, the more likely an intervening behaviour might accidentally be reinforced.
- **Avoid Reinforcing the Wrong Behaviors.** An important thing to note is that positive reinforcement is not always good. Positive reinforcement can also strengthen undesirable behaviors. For example, when a child misbehaves in a store, some parents might give them extra attention or even buy them a toy in an effort to stop the behavior. Children quickly learn that by acting out, they can gain attention from their parents or even acquire objects they want. Essentially, parents are reinforcing the misbehaviour. A better solution would be to use positive reinforcement when the child is displaying good behavior. Instead of rewarding the misbehaviour, the parents would want to wait until the child behaves well and then reward that good behaviour with praise, treats, or even a toy.

#### **e. The two major types of reinforcement schedules**

Choosing the right kind of reinforcement is not enough. It's timing also plays an important role in its effectiveness. Hence, different schedules of reinforcement come in handy to increase the effectiveness of the reinforcers used. The schedule of reinforcement refers to the frequency and manner in which the desired behaviour is reinforced. The following are major types of reinforcement schedules:

1. **Continuous Reinforcement:** In this type of schedule, the desired behaviour is reinforced every time it occurs. This schedule is most suitable when teaching a new behaviour because it leads to immediate results by creating a strong association between the behaviour and response. Be that as it may, continuous reinforcement is time-consuming and leads to satiation a lot sooner than the other types of reinforcement.
2. **Partial Reinforcement:** In this type of schedule, the desired behaviors are not reinforced each time they occur. The behaviors are reinforced at an interval that is either fixed or variable. The intervals are set to maximize the effectiveness of the reinforcers. This schedule is most suitable when a behaviour has already been established. There are four kinds of partial schedules, according to different needs and purposes:
  - **Fixed Ratio:** The behaviour is reinforced after a specific number of occurrences. For instance, after every two responses.
  - **Variable Ratio:** The behaviour is reinforced after a variable number of occurrences. For instance, after the first response, then after the third response, and then maybe after the fifth response.
  - **Fixed Interval:** The behaviour is reinforced after a specific period. For instance, after every alternate hour or a day or a week.
  - **Variable Interval:** The behaviour is reinforced after a variable period. For instance, after one minute, then after thirty minutes, and then after ten minutes.

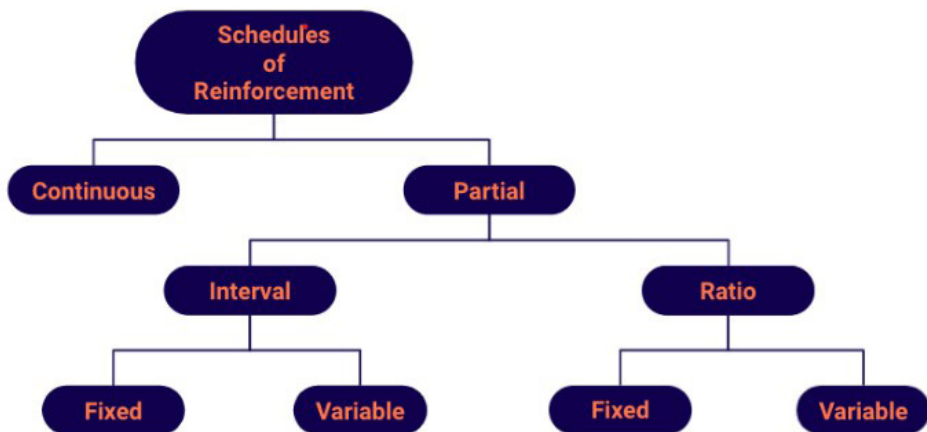


Figure 8: Schedule of reinforcement

Schedules of reinforcement can play an important role in the effectiveness of the reinforcement. For example, while forming a new habit in a classroom or at home, parents can use the continuous reinforcement schedule. Once a habit is formed, parents may change it to a partial reinforcement schedule, depending on the need and the kind of behaviour being reinforced.

### 6.2.3 Positive punishment

Positive punishment is a type of operant conditioning, a theory proposed by psychologist B.F Skinner. Its main purpose is to reduce the future frequency of the behaviour by applying an aversive stimulus after the behaviour occurs. Positive punishment in psychology is what we refer to as “punishment” in everyday life. It is often used when we want to suppress unwanted behavior. In parenting, the aversive response is often referred to as the negative consequence.

#### a. Some Examples of positive punishment

- A police officer issues a ticket to the driver who exceeds the speed limit. The ticket is used to reduce illegal speeding.
  - Aversive Stimulus-Speeding ticket,
  - Undesired behaviour – speeding
- When a person is late in filing an annual tax return, they have to pay a fine. A fine is used to deter people from filing late.
  - Aversive stimulus – fine
  - Undesired behaviour – filing the tax return late

#### Other examples:

- Yelling at a child for bad behavior.
- Forcing them to do an unpleasant task when they misbehave.
- Adding chores and responsibilities when he fails to follow the rules.
- Assigning students who forget to turn in their assignment extra work.
- Adding extra sensitivity training to employees who offend or harass someone at work.

#### b. The Positive Effects of Punishment

Although “punishment” sounds inherently negative, it’s not necessarily a negative thing. In operant conditioning, punishment is simply the discouragement of a behavior; it can be as benign as sitting a child down and explaining to them why they should no longer engage in a bad behavior.

The positive outcomes of using punishment include:

- The person is informed that their behaviour is not acceptable, and now knows what not to do in the future.
- The person is given a punishment or negative consequence, which teaches her that behaviour has consequences and will hopefully help her associate the two.

- The person is given a good reason to behave more appropriately in the future, and eventually should be given an opportunity to do so.

There are some downsides to punishment as well:

Punished behaviour is not necessarily forgotten, just suppressed, meaning that it may return when the punishment is no longer implemented.

- It may cause increased aggression and teach the person that aggression is a good way to solve problems (only with certain types of punishment).
- It can create fears that generalize to other situations (e.g., a child who is punished for being disruptive may withdraw and begin to fear social situations).
- It does not always guide the child toward the desired behavior; it tells the child what not to do but may not tell the child what he or she should do instead (McLeod, 2018).
- Ideally, a child would be raised with both reinforcement and punishment in a healthy mix—receiving rewards for good behaviour and being corrected for bad behavior. Often, both are vital pieces of parenting, and each can accomplish what the other fails to accomplish.

For example, reinforcement is a great tool for encouraging good behavior, but it gives the child no feedback on bad behaviour (although sometimes the bad behaviour is simply the opposite of the good, like adhering to the curfew vs. breaking the curfew). Likewise, punishment is good for discouraging bad behavior, but it has the unfortunate flaw of telling the child nothing about which behaviour is actually desired. These flaws in each method largely disappear when parents employ both methods and are communicative about what they expect to see and what they expect not to see from their child.

### c. Positive Punishment in the Workplace

Punishment doesn't necessarily stop when we become adults. The punishment can be effective in stopping undesirable employee behaviors, such as tardiness and absenteeism, is a popular one.

These are all instances of positive punishment at home, school and at work:

- **Scolding.** Being reprimanded or lectured is something many children would like to avoid. Being verbally scolded by your boss, or perhaps by your Human Resources department.
- **Hand slapping or grabbing.** This may instinctively happen in the moment. You might lightly slap the hand of a child reaching for a pot of boiling water on the stove, or who's pulling their sibling's hair. You might forcefully grab or pull a child who's about to run into traffic.

- **Writing.** This method is often used in school. The child is obligated to write the same sentence over and over or write an essay about their behavior.
- **Chores.** Many parents add tasks as a form of punishment. A child who scribbles on the wall or smears peanut butter all over the table might be forced to clean it up or perform other household tasks. Being assigned the tasks no one wants to do for failing to produce quality work on time. Being assigned extra training when you break the rules or behave in an unprofessional manner.
- **Rules.** Few people crave more rules. For the child who frequently misbehaves, adding additional house rules might be incentive to change a behavior. Receiving an official warning for calling off work too often.



### Application activity 6.2

#### Read this scenario and answer to the question below:

A teenage girl has a driver's license, but it does not allow her to drive at night. However, she drives at night several times a week without facing any consequences. One evening while she is driving to the mall with a friend, she is pulled over and issued a ticket.

As a result, she receives a notice in the mail a week later informing her that her driving privileges have been revoked for 30 days. Once she regains her license, she goes back to driving at night even though she has six more months before she is legally allowed to drive during the evening and nighttime hours.

1. As you might have guessed which one is the negative punishment in this example?
2. So why would she continue to engage in the behaviour even though it led to that negative punishment?
3. What is the difference between negative reinforcement and punishment?

## 6.3. Operant conditioning: Negative reinforcement

### Learning Activity 6.3



**Read the following statements and answer the question.**

1. On Monday morning, you leave the house early (the behavior) to avoid getting stuck in traffic and being late for work (removal of an aversive stimulus).
2. At dinner time, a child pouts and refuses to eat her vegetables for dinner. Her parents quickly take the offending veggies away.

**Question:** Can you identify the negative reinforcer in each of these examples?

### 6.3.1 Description of operant conditioning: negative reinforcement

Negative reinforcement occurs when something unpleasant or uncomfortable is removed or taken away in order to increase the likelihood of the desired behavior. Children want to avoid the distressing, so they do what needs to be done. Thus, taking away something unpleasant, in this case, distressing, results in the desired behavior. Negative reinforcement is encouraging the desired behaviour to repeat in the future by removing or avoiding an aversive stimulus. Negative reinforcement also strengthens a response or behaviour by stopping, removing, or avoiding a negative outcome or aversive stimulus. It refers as taking away something or something being subtracted to provide a favourable outcome or avoid undesirable outcomes as the consequence.

### 6.3.2 Types of Negative Reinforcement

There are two main types of negative reinforcement: **escape and avoidance**. These differ in when the aversive stimulus is removed.

1. **Escape Learning:** Escape learning occurs when an animal performs a behaviour (such as pressing a lever) to stop or avoid an aversive stimulus (such as electric shock) (Dozier, Foley, Goddard, & Jess, 2019). For example, a rat in a Skinner box **may learn** to press a lever to stop the delivery of an electric shock. Once the animal has learned this behavior, the delivery of shock serves as an aversive stimulus that can be used to reinforce other desired behaviors (such as pressing a different lever).

**2. Avoidance Learning:** Avoidance learning occurs when an animal performs a behaviour (such as jumping over a hurdle) to avoid or escape an aversive stimulus (such as an electric shock). For example, a bird in a laboratory experiment may learn to go into a dark compartment to avoid being exposed to a loud noise. Once the animal has learned this behavior, the loud noise serves as an aversive stimulus that can be used to reinforce other desired behaviors (such as going into dark compartments, even when there is no aversive stimulus present) (Dozier, Foley, Goddard, & Jess, 2019).

### 6.3.3 Workplace Example of Negative Reinforcement

At work, negative reinforcement can boost productivity or sales. For instance, at a manufacturing company, employees must attend work five days a week, eight hours a day. However, to encourage greater productivity, a supervisor might reduce work hours for the final week of the month. If employees meet a production goal, they won't have to spend as much time at work.

The following are other examples of negative reinforcement in everyday life.

- Stop fighting with siblings to avoid getting a time-out.
- Follow the law to avoid being put in jail.
- Drive under the speed limit to avoid getting a speeding ticket.
- Leave home early for work to avoid being stuck in traffic and arriving late.
- Buy concert tickets early to avoid being sold out.
- Wear a seat belt to avoid injury in case an accident happens.
- Leaving early from the house to avoid traffic jams.
- Feeding the baby to stop them from crying.

### 6.3.4 Important tips of what Negative Reinforcement is and is not

- Negative reinforcement is about encouragement.
- Negative reinforcement is not a negative thing. Instead, it's about removing a negative thing.
- Negative reinforcement is not the same as punishment or a negative consequence for an action.
- Negative reinforcement is not the opposite of positive reinforcement. Both types of reinforcement encourage a behavior.
- Negative reinforcement does not reinforce negative behavior. It reinforces the behaviour that removes the negative stimulus.

### 6.3.5 Uses for Negative Reinforcement

Negative reinforcement can be utilized in a variety of ways in many different settings. A few examples include:

- **Parenting:** Parents can use negative reinforcement to encourage positive behaviors in various ways. For example, a parent might eliminate a task that their child is supposed to do if they finish all of the other tasks on their list. Another example is giving children more time to play if they finish all of their homework first.
- **Education:** One example of negative reinforcement in the classroom is cancelling a task that students dislike (such as a pop quiz) if they complete all their assigned work on time.
- **Psychotherapy:** Negative reinforcement is often utilized as a part of addiction treatment and behavioral therapy. People who have been convicted of drug-related offenses, for example, might be able to have their sentences reduced if they participate in drug and alcohol treatment. In behavioral therapy, negative reinforcement can help strengthen positive behaviors. As people develop skills, they may find that practicing new coping skills eliminates unpleasant outcomes, which can help further reinforce new behaviors.

### 6.3.6 Benefits of Negative Reinforcement

Negative reinforcement can have several benefits that can make it a valuable tool in the learning process. Potential advantages include:

- **It can increase desirable behaviours:** Because it involves the removal of an undesirable stimulus, it can help strengthen more positive behaviours.
- **It can lead to lasting changes:** When applied correctly, negative reinforcement can contribute to long-lasting changes in behavior.
- **It can work quickly:** The removal of an aversive stimulus can lead to relatively quick behaviour change.

Negative reinforcement can be an effective way to strengthen the desired behavior. However, it is most effective when reinforcers are presented immediately following a behavior. When a long period elapses between the behaviour and the reinforcer, the response is likely to be weaker. In some cases, behaviors that occur in the intervening time between the initial action and the reinforcer are may also be involuntarily strengthened as well.

### 6.3.7 Potential Difficulties of Negative Reinforcement

While negative reinforcement can be a helpful learning tool, it can have some potential downsides.

- **It can be misinterpreted:** When a negative stimulus is removed, usually without explanation, it can sometimes lead to problems with communication. It can potentially create misunderstandings in relationships where people misread the other person's intentions.
- **Poor timing can render it ineffective:** If the delivery of negative reinforcement is not timed correctly, it can be less effective. A large gap between the behaviour and the removal of an aversive stimulus means that people will be less likely to form a connection between the action and the consequences of the action.



### Application activity 6.3

1. Between these two statements, choose one example of positive reinforcement and one example of negative reinforcement.
  - Allowing a child to play on their tablet if they finish their homework.
  - A child finishing his homework to avoid having his tablet taken away.
2. Pulling on a strap reduces the annoying noise Sarah's backpack makes when she walks. As a result, she frequently pulls and readjusts this strap. Her behaviour has been influenced by:
  - a) Positive reinforcement
  - b) Positive punishment
  - c) Extinction
  - d) Negative punishment
  - e) Negative reinforcement

## 6.4. Operant conditioning: Negative punishment

### Learning Activity 6.4



**Read these scenarios and answer the questions.**

- After two children get into a fight over who gets to play with a new toy, the mother simply takes the toy away from both children.
- A teenage girl stays out for an hour past her curfew, so her parents ground her for a week.
- A third-grade boy yells at another student during class, so his teacher takes away his "good behavior" tokens that can be redeemed for prizes

### 6.4.1. Description of operant conditioning: negative punishment

Negative punishment is an important concept in B. F. Skinner's theory of operant conditioning. In behavioral psychology, the goal of punishment is to decrease unwanted behavior. In the case of negative punishment, it involves taking something good or desirable away to reduce the occurrence of a particular behavior. An example of negative punishment is taking away your child's favourite toy because they refuse to pick up after themselves. The goal of negative punishment is to get your child to pick up after themselves to avoid having toys taken away. Timeout is also a form of negative punishment.

### 6.4.2. Examples of Negative Punishment

When it comes to the real world, negative punishments are found everywhere. It's one way that employers, parents, teachers and even the government try to make sure that people don't break the rules.

**Dive into some fun and unique negative punishment examples in real life.**

- **Missing Curfew/ being late.** A teenager has a curfew of 10 p.m. She misses her curfew by 10 minutes. Her parents take away the Bluetooth speaker in her room for three days. In this instance, the teen's parents are taking away her speaker (something she values and enjoys) as punishment for missing curfew. By taking away her speaker, they hope that the teen will not miss curfew again.
- **Answering the Phone in School.** A teen answers his phone in the classroom, interrupting the teacher. The teacher takes away his phone for the rest of the day. Here, the teacher is hoping that by taking away the phone (positive item) as punishment, the teenager will not answer his phone in class again. This is because they do not want the repeat punishment of losing their phone.
- **Not Completing Work.** At a customer service center, a worker isn't answering enough phone calls. The boss calls the worker into his office and demotes his pay for his bad performance. By taking away some of the workers' pay (negative punishment), the employer is hoping that the employee will improve their work performance. If it doesn't, the employer might try another form of negative punishment, like firing.
- **Breaking the Law.** A drunk driver is pulled over by the police. After several sobriety tests, the police officers arrest the man and impound his car for breaking the law against drinking and driving. Governments provide negative punishments when you break the laws.

The impounding of the car is a negative punishment for the driver, because they lose the positive privilege of having the car. This will be even worse, because the driver will also have to pay fees to get their car back (losing money).

- **Fighting with Siblings.** Two sisters are fighting over playing a video game. Because they are fighting over the game, their mother takes the game away for the rest of the week. To curb the undesirable behaviour of fighting, the mother is taking away the video game. By taking it away, the sisters might think next time about sharing rather than fighting over it.
- **Stealing work Supplies.** A worker is caught stealing supplies from her workplace. The workplace has a zero tolerance for employee stealing. After being caught, she is fired from her job. The employer is taking away the job (a desirable thing) for being caught stealing (behaviour that needs modification). This is an example of negative punishment, because the worker will no longer have money to live and must find a new job. This will also encourage the worker not to steal in the future.
- **Refusing to do assigned tasks.** A brother and sister are not doing their task when they come home from school. Fed up, a mother resets the Wi-Fi password so the children can no longer access the Internet. The mother is attempting to punish the children for not doing their tasks by taking away their online privileges. In the future, the children know that if they don't do their tasks, they will lose access to the Internet.
- **Swearing in School.** A high school senior swears in school and is sent home with a note. His parents take away his car keys for one week and make him ride the bus to school. The poor choice of swearing in school is punished through revoking the teen's independence by taking his car keys. This will make the young man think about swearing in school again and hopefully curb the behavior.
- **Growling dog.** A dog growls every time someone approaches his food bowl. His owner takes away his food bowl every time he growls. Removal of the food is something that the dog doesn't want. Therefore, the dog will stop growling when someone approaches his food bowl because he wants to keep his food.

### 6.4.3. Effectiveness of Negative Punishment

Negative punishment is very effective in reducing bad or unwanted behaviors. This is because it makes a person (or animal) start to associate the loss of something positive (like their car or video game) with the negative behaviour (swearing or missing curfew). In order for Negative punishment to be effective, the following criteria are met: contingency, contiguity, and consistency.

- **Contingency:** Contingency describes the dependent nature of the punishment on the behavior. If the punishment is applied whenever the target behaviour appears, then the punishment depends on the appearance of the undesired behavior. If the stimulus removal happens whether the act appears or not, or before the behaviour occurs, then it is less likely to work.
- **Continuity:** Contiguity is the immediacy of the behaviour and stimulus removal. If punishment is delayed, the suppression of behaviour will not be as effective. When there is a significant gap between the behaviour and stimulus removal, the association is weakened. In addition, other actions may appear in the meanwhile, and this behaviour then mistakenly becomes the one being suppressed.
- **Consistency:** Consistency is necessary for negative punishment to work. Consider speeding. People still regularly speed despite the possibility of receiving a traffic ticket because they don't get one every time. They are only fined if they are caught, and that's why it doesn't work well in this case.

#### 6.4.4. Side Effects of Negative Punishment

One problem of negative punishment is that it works for as long as the stimulus is consistently removed. But once the punishment stops, the undesired behaviour is very likely to resume. Another drawback is, while it can stop an undesired behavior, it doesn't provide information on what the desired action is.



#### Application activity 6.3

**Read this scenario and answer the question.**

A social worker meets with a 16-year-old girl and her parents due to increasing parental-child conflicts. The parents describe their daughter's behaviour as "out of control" and the daughter describes her parents' expectations as "unfair and unreasonable." The parents explain that they will let their daughter go out with friends on the weekends only if she maintains a 4.0 grade point average.

1. What is the correct term that is described in the scenario?
  - A. Negative Reinforcement
  - B. Positive Reinforcement
  - C. Negative Punishment
  - D. Positive Punishment
2. Explain the other terms proposed above that you did not select.

## 6.5. Observational learning

### Learning Activity 6.5



After watching many Marvel movies, Tom now lands in a superhero pose each time he jumps off the monkey bars at the playground.

Which one of the following situations is demonstrated by Tom? Justify your answer.

- a) Unconditioned response
- b) Observational learning
- c) Primary reinforcement
- d) Instrumental learning
- e) Biological preparedness

### 6.5.1. Description of observational learning

Canadian/American psychologist, Albert Bandura, was one of the first psychologists to recognize the phenomenon of observational learning. His theory, Social Learning Theory, stresses the importance of observation and modelling of behaviors, attitudes and emotional reactions of others. He found that, as social animals, humans naturally gravitate toward observational learning. Children watch their family members and mimic their behaviors. Even infants, at just 3-weeks old, start imitating mouth movements and facial expressions of adults around them.



Observational learning is the process of learning by watching the behaviors of others. As the name suggests, this type of learning occurs through observing and imitating others. When people watch how other individuals behave, they often retain this information and later repeat similar behaviours. Observational learning, or shaping and modelling, most often occurs during childhood. This type of learning can be an important part of socialization when children learn how to behave and react to others. Children typically learn how to act by watching how their parents or other significant people in their lives interact with others. The targeted behaviour is watched, memorized, and then mimicked.

While at times, people intentionally observe experts to learn new information, observational learning isn't always intentional. Especially in young children, a child may learn to swear or smoke cigarettes by watching adults. They are continually learning through observation, whether the target behaviour is desirable or not.

### **a. A model**

A model is the person performing the task being imitated. In the example of a child learning to swear, the model is the parent that said the swear word. The child is using their parent as a model that they observe performing a behavior.

### **Characteristics of a good model:**

People do not just imitate anyone. Most often, people mimic others that:

- Are similar to them,
- Are in high-status positions,
- Are experts or knowledgeable,
- Are rewarded for their behaviors,
- Provide people with nurturing (parents or guardian-figures).

### **b. Bobo Doll Experiment**

In the experiment, children were shown a video where a model would act aggressively toward an inflatable doll – hitting, punching, kicking, and verbally assaulting the doll. There were three different endings:

1. The model was punished for their behavior.
2. The model was rewarded for their behavior.
3. There were no consequences.

After watching the model, children were given a Bobo doll, identical to that in the video. Their behaviors were observed. Researchers found that children were more likely to mimic violent behaviors when they observed the model receiving a reward, or when no consequences occurred.

On the flip side – children that observed the model being punished for violence showed less actual violence toward the doll. Bandura's classic Bobo Doll experiment showed that children would mimic violent behaviors, simply by observing others.

### 6.5.2. Benefits of observational learning

Observational learning happens indirectly, meaning that there is no formal process for teaching or learning with this method. Here are some of the key benefits of observational learning:

- **Learning new skills:** Children and adults can learn new skills through observational learning. A child can learn how to paint her nails by watching their mom, or an adult may learn to lift weights by watching others on videos.
- **Reinforcing positive behavior:** Some people can learn positive behaviour by observing others. If a student sees a friend of theirs being rewarded with candy for their good grades in school, the student may work harder to model similar behaviour so that they can receive candy in the future.
- **Decreasing negative behavior:** Observational learning can also decrease negative behaviour in people. If a co-worker is frequently late for meetings and is reprimanded by a supervisor, this discourages others from arriving late.

### 6.5.3. Four Processes or stages of Observational Learning

According to Bandura's research, there are four processes that influence observational learning:

1. Attention
2. Retention
3. Reproduction
4. Motivation

**Let's take a look at each in more depth:**

#### 1. Attention

To learn, an observer must pay attention to something in the environment. They must notice the model and the behaviour occurring. Attention levels can vary based on the characteristics of the model and environment – including the model's degree of likeness, or the observer's current mood. In humans, it is likely the observer will pay attention to behaviors of models that are high-status, talented, intelligent, or similar to the observer in any way. There are a few factors that affect a person's ability to focus and give their full attention:

- **Physical similarities:** Observers sometimes pay more attention to others who are of the same sex or similar age.
- **Prestige:** Observers are more likely to be influenced by people they see as attractive, successful, or distinguished.
- **Health:** If an observer is ill or tired, they may not be able to focus completely on the subject they're observing. This can impact their ability to later imitate the behaviour they learned.

For example, if you want to become a VP at your company, it makes sense that you'd observe the current VP's (or other renowned VPs in your industry) and try to mimic their behavior.

## 2. Retention

Simple attention is not enough to learn a new behavior. An observer must also retain, or remember, the behaviour at a later time. To increase chances of retention, the observer must structure the information in an easy-to-remember format. Maybe they use a mnemonic device. Or form a daily learning habit. The behaviour must be easily remembered so the action can be performed with little or no effort. Factors that might influence retention include interference, time, interest, and motivation.

- **Interference:** If other things in the environment compete for attention, they may interfere with how well the observed learning is retained.
- **Time:** If a great deal of time lapses between the observation and the performance of the behavior, memory of the action may also be weak.
- **Motivation:** Interest and motivation can significantly influence how well observational learning is retained. If it is something the person is greatly interested in or if he or she is highly motivated to imitate the observed actions, retention will likely be much more significant.

Using our VP example, let's say the current VP is giving a company-wide presentation. You notice that they are calm, confident, engaging, and use eye contact. You make a list of these attributes and remember them for the next time you give a presentation.

## 3. Reproduction

Reproduction is the process where the observer must be able to physically perform the behaviour in the real-world. An individual's capacity to recreate a behaviour successfully depends on a few factors:

- **Age or physical attributes:** If a small child watches a baseball player hit a home run, they may try to replicate the action before they are physically able to accomplish it.

- **Ability level:** If a toddler watches their parent folding towels and tries to mimic that behavior, it is likely going to take them an extended period of time to complete it properly. This is due to the child's motor skills not having fully developed to that level of ability.
- **Difficulty of learned behavior:** The time to successfully replicate a behaviour depends on whether it is simple or difficult to model. If the behaviour is simple, such as an adult watching someone wash their car, then the learner is likely to model that behaviour with ease. If it's challenging, it may take more time and effort.

Often, producing a new behaviour requires hours of practice to obtain the skills. You can't just watch your VP give a brilliant company-wide presentation, then use only the observed tactics in your own presentation 20-minutes later.

**For example:** Using the VP example again, you've observed and identified four skills that the current VP uses during presentations. To be able to perform these skills yourself, you need to deliberately practice these skills. Maybe you hold small team meetings to test your skills. Or you ask team members for feedback on your presenting skills. In a few months, you will have sharpened your presenting skills and may be ready to produce a behaviour similar to the current VP.

#### 4. Motivation

All learning requires some degree of personal motivation. For observational learning, the observer must be motivated to produce the desired behavior. Sometimes this motivation is intrinsic to the observer. Other times, motivation can come in the form of external reinforcement – rewards and punishments. Bandura identified a number of factors that can influence motivation in observational learning:

- If the observed model was rewarded for their actions
- When the model is the same age and sex as observer, or if observer shares similar interests
- If observer is unsure of his/her own knowledge and skill
- When observer sees the model as being more knowledgeable and skilled
- People who have a higher status
- Authoritative people
- If the situation is ambiguous and the observer is unsure what to do

By using VP example again, the motivation is intrinsic. You understand that the path to becoming a VP at your company requires a certain skill set.

### 6.5.4 Some few real-world examples of observational learning

- A child watches their mother eat dinner with a fork. They observe the behaviour and quickly learn how to use a fork themselves.
- A high-school basketball player watches Stephen Curry shoot free-throws. They observe details such as the number of ball dribbles and hand follow through patterns, then try to mimic the behaviour themselves.
- A child watches their parent folding the laundry. They later pick up some clothing and imitate folding the clothes.
- A young couple goes on a date to an Asian restaurant. They watch other diners in the restaurant eating with chopsticks and copy their actions to learn how to use these utensils.
- A child watches a classmate get in trouble for hitting another child. They learn from observing this interaction that they should not hit others.
- A group of children play hide-and-seek. One child joins the group and is not sure what to do. After observing the other children play, they quickly learn the basic rules and join in.
- A newer employee avoids being late to work after seeing a co-worker fired for being late.
- A new customer in a store learns the process for lining up and checking out by watching other customers.
- A customer in a clothing store learns the procedure for trying on clothes by watching others.
- A person in a coffee shop learns where to find cream and sugar by watching other coffee drinkers locate that area.
- A tenant sees a neighbour evicted for late rent payment and as a result consistently pays her rent on time.
- An inexperienced salesperson is successful at a sales meeting after observing the behaviors and statements of other salespeople.
- A viewer watches an online video to learn how to contour her foundation makeup, then buys makeup and later tries the look herself.
- Drivers slow down when they see that another driver has been pulled over by a police officer.
- A bank teller watches their more efficient colleague to learn a better way of counting money quickly.
- A shy party guest watches a more popular person talk to different people in the crowd, and later can do the same thing.

- Adult children begin to act the same way that their parents did when they were young.
- A lost tourist watches a local person navigate the subway system and later can do it on their own.

### 6.5.5 Positive and Negative impacts of observational learning theory

Observational learning has the potential to teach and reinforce or decrease certain behaviors based on a variety of factors. Particularly predominant in childhood, observational learning can be a key part of how the learn new skills and learn to avoid consequences.

However, there has also been concern about how this type of learning can lead to negative outcomes and behaviors. For example, previous research drew a direct connection between playing certain violent video games and an increase in aggression in the short term.

Similarly, research looking at sexual media exposure and teenagers' sexual behaviour found that, in general, there was not a connection between watching explicit content and having sex within the following year. Another study indicated that if teenagers age 14 and 15 of the same sex consumed sexual media together and/or if parents restricted the amount of sexual content watched, the likelihood of having sex was lower. The likelihood of sexual intercourse increased when opposite-sex peers consumed sexual content together. Research indicates that when it comes to observational learning, individuals don't just imitate what they see and that context matters. This may include who the model is, who the observer is with, and parental involvement.



#### Application activity 6.5

##### **Read this scenario and answer to questions:**

Clara is 17 years old. Cara's mother and father both drink alcohol every night. They tell Cara that drinking is bad, and she shouldn't do it. Cara goes to a party where beer is being served. What do you think Cara will do? Why?

## 6.6. End Unit Assessment




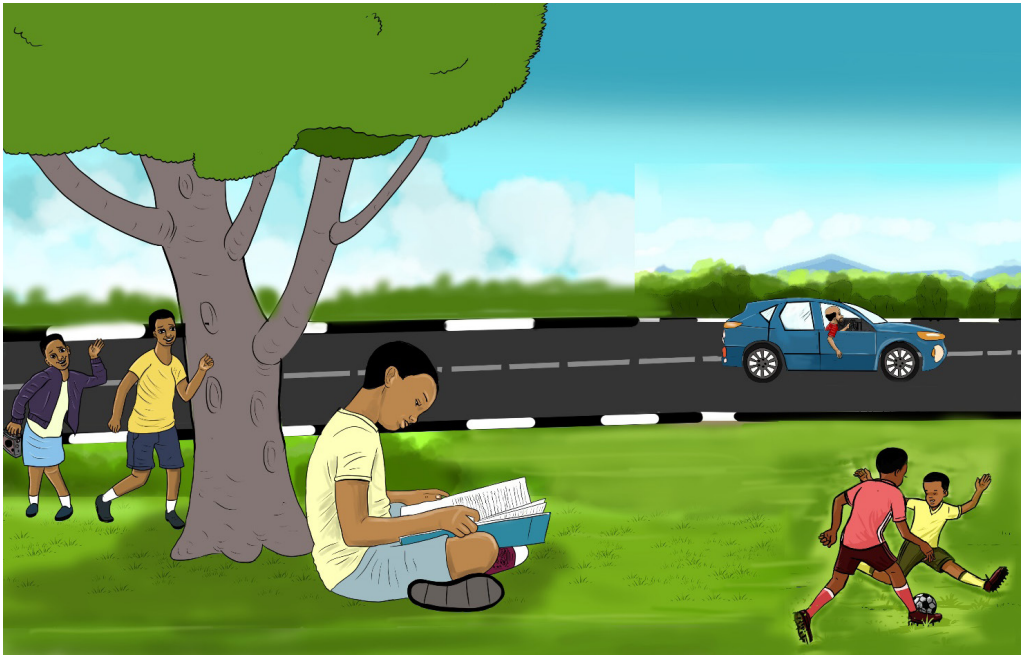
### End unit assessment

1. Which of the following theories is also known as theory of Reinforcement? Justify your answer.
  - Operant conditioning theory,
  - Stimulus response theory,
  - Classical conditioning theory,
  - Classical conditioning theory and theory of insight.
2. Compare and contrast types of behavioral learning.

# Unit 7

## MEMORY

 **Key unit competence:** Develop a basic understanding of the nature and characteristics of memory processes and systems.



### Introductory activity

In everyday life people are getting information from different sources, the information got is saved in our memory or brain and it is retrieved later while needed.

- What do you understand by the term memory?
- Discuss about types of memory?
- Analyze how information is processed in memory?
- Why do some people remember easily while others do not?

## 7.1. Information processing model

### Learning Activity 7.1



Brainstorm on how information is processed in memory.

**Memory** is an organism's ability to store, retain, and recall information and experiences. It is our ability to encode, store, retain and subsequently recall information and past experiences in the human brain.

It is also the ability to store and retrieve information when people need it. It involves the ability to both preserve and recover information. However, this is not a flawless process. Sometimes people forget or misremember things (the process of storing the outcomes of learning in the form of information that can be retrieved when required). The information we process and learn is registered and stored in the memory system. Memory also helps us to easily retrieve the stored information when it is required for use. For example, writing the answers in the examination after studying for the paper.

### Key memory structures in the brain

The main parts of the brain involved with memory are the amygdala, hippocampus, cerebellum, neocortex and basal ganglia.

For explicit memories – which are about events that happened to you (episodic), as well as general facts and information (semantic) – there are three important areas of the brain: the hippocampus, the neocortex and the amygdala. Implicit memories, such as motor memories, rely on the basal ganglia and cerebellum.

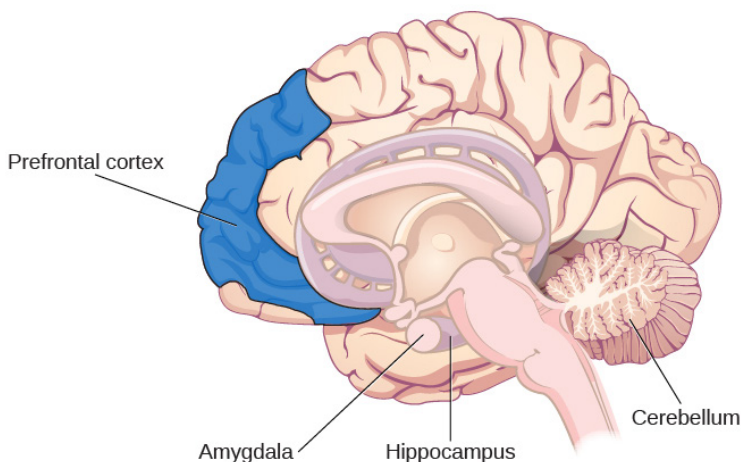


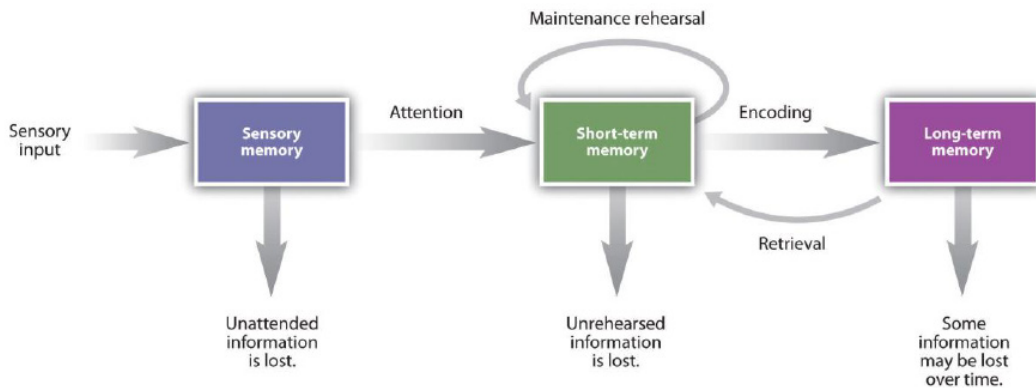
Figure 9: Amygdala, hippocampus, cerebellum, neocortex and basal ganglia

**Amygdala:** The main job of the amygdala is to regulate emotions, such as fear and aggression. The amygdala plays a part in how memories are stored because storage is influenced by stress hormones.

**Hippocampus:** The hippocampus is involved in memory, specifically normal recognition memory as well as spatial memory (when the memory tasks are like recall tests) (Clark, Zola, & Squire, 2000). Another job of the hippocampus is to project information to cortical regions that give memories meaning and connect them with other connected memories. It also plays a part in memory consolidation: the process of transferring new learning into long-term memory.

**The prefrontal cortex** plays an important part in memory, intelligence, concentration, temper and personality.

**The cerebellum** is primarily responsible for muscle control, including balance and movement. It also plays a role in other cognitive functions such as language processing and memory.



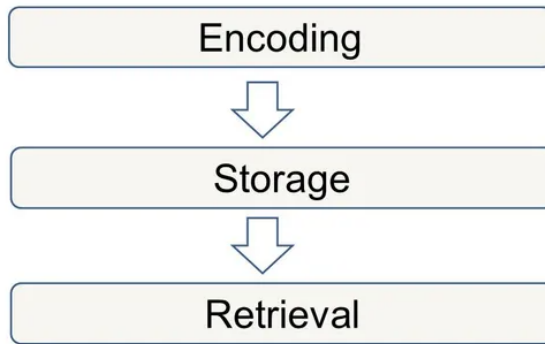
*Figure 10: Information processing model*

**Source:** Adapted from Atkinson, R. C., & Shiffrin, R. M. (1968).

Human memory: A proposed system and its control

Another way of understanding memory is to think about it in terms of stages that describe the length of time that information remains available to us. As shown on the figure above information begins in sensory memory, moves to short-term memory, and eventually moves to long-term memory. But not all information makes it through all three stages; most of it is forgotten. Whether the information moves from shorter-duration memory into longer-duration memory or whether it is lost from memory entirely depends on how the information is attended to and processed.

For psychologists the term memory covers three important aspects of information processing. They are represented in figure 11.



*Figure 11: Aspects of information processing*

### **i) Encoding**

When information comes into our memory system (from sensory input), it needs to be changed into a form that the system can cope with, so that it can be stored. There are three main ways in which information can be encoded (changed):

- Visual (picture)
- Acoustic (sound)
- Semantic (meaning)

Encoding is the process by which we place the things that we experience into memory. Unless information is encoded, it cannot be remembered. You have been to a party where you were introduced to someone and then, maybe only seconds later, you realized that you did not remember the person's name. You could not remember the name, probably because you were distracted and never encoded the name to begin with.

It is also the process by which sensory information gets into memory. In everyday language, encoding has much in common with attention and learning. When a student is listening to a teacher, watching a movie, listening to music or talking with a friend, he or she is encoding information into memory.

Not everything we experience can or should be encoded. We tend to encode things that we need to remember and not bother to encode things that are irrelevant.

One way to improve our memory is to use better encoding strategies. Some ways of studying are more effective than others. Research has found that we are better able to remember information if we encode it in a meaningful way. When we engage in elaborative rehearsal or elaborative encoding, we process new information in ways that make it more relevant or meaningful ( Craik & Lockhart, 1972; Harris & Qualls, 2000).

Ineffective encoding, or an encoding failure, is an important cause of memory failure and forgetting in humans if you do not make the correct association between memories. For example, you will not be able to retrieve a memory when cued. If you have encoded someone's name in the category of "people in my class," you might not be able to identify that person when you see them in the grocery store. Whether you are trying to learn names or definitions for psychology, it is important to make useful associations when you encode or memorize the information.

The cognitive perspective focuses on how information is inputted, processed, and retrieved, and you might think about how computers do pretty much the same thing. You might also try to organize the information into meaningful units. You also might try to use visual cues to help you remember the information. Each person has his or her unique way of elaborating on information; the important thing is to try to develop unique and meaningful associations among the materials.

### **Three concepts are related to encoding:**

- **Attention:** this involves concentrating and focusing mental resources.
- **Rehearsal:** Rehearsal is the conscious repetition of information over time to increase the length of time information stays in memory. Rehearsal works best when individuals need to encode and remember a list of items for a brief period.
- **Deep processing:** Following the discovery that rehearsal is not an efficient way to encode information for long-term memory.

### **ii) Storage**

Storage is the retention of information over time. After people encode information, they need to retain or store the information. This concerns the nature of memory stores, i.e., where the information is stored, how long the memory lasts for (duration), how much can be stored at any time (capacity) and what kind of information is held.

The way we store information affects the way we retrieve it. There has been a significant amount of research regarding the differences between Short Term Memory (STM) and Long Term Memory (LTM). If we can "chunk" information together we can store a lot more information in our short-term memory. In contrast, the capacity of LTM is thought to be unlimited. Information can only be stored for a brief duration in STM (0-30 seconds), but LTM can last a lifetime.



## 7.2. Levels / stages of processing memory

### Learning Activity 7.2



The information acquired get into memory through senses and such information can be stored either in short term memory or in long term memory.

- Which kind of information can be stored under short term memory and which ones can be stored under long term memory?
- How does sensory memory helpful in acquiring information?
- What helps individuals learn new information and store it in long-term memory?

Psychologists have discovered that memory is not a single or unitary system. It has more than one distinct system. In other words, there are more than one type of memory. According to the most acceptable model of memory, there are three major systems of memory: Sensory Memory; Short-Term Memory (STM), and Long-Term Memory (LTM). Information moves successively through these three systems if attention is given to the material. If attention (focused awareness) is not given, information does not move further into the system.

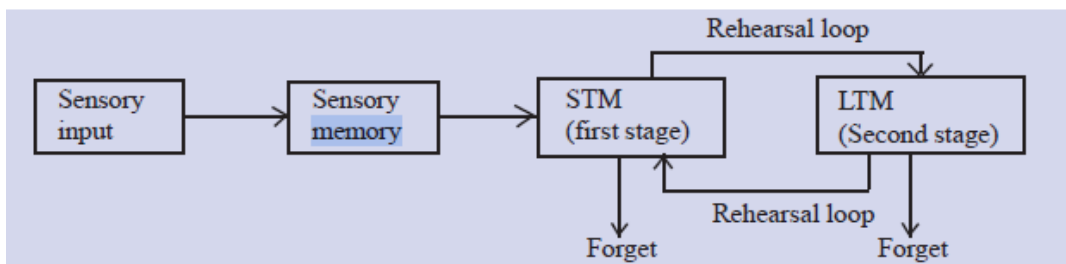


Figure 12: Information processing

### 7.2.1 Sensory memory

Sensory memory refers to the brief storage of sensory information. Sensory memory is a memory buffer that lasts only very briefly and then, unless it is attended to and passed on for more processing, is forgotten. The purpose of sensory memory is to give the brain some time to process the incoming sensations, and to allow us to see the world as an unbroken stream of events rather than as individual pieces.

It refers to the brief storage of sensory information. Unless it is attended to and passed on for more processing, the memory is quickly forgotten. The purpose of sensory memory is to give the brain some time to process the incoming sensations, and to allow us to see the world as an unbroken stream of events rather than as individual pieces.

It holds information from the world in its original sensory form for only an instant, not much longer than the brief time. It actually lasts less than one second. A student is exposed to visual, auditory, and other sensations. Because sensory information lasts for only a transitory moment, an important task for the student is to attend to the sensory information that is important for learning.

Sensory Memory hold any object about 12 inches in front of you. Look at it steadily for a while. Close your eyes and notice how long the clear image of that object lasts. A clear visual image of any object will last in sensory memory for about half a second after the stimulus is removed. Sensory memory holds representations of sensory input for very brief periods of time, depending upon the modality involved. There are different sensory registers for each of the senses.

#### **Under sensory memory we also have:**

- **Iconic memory** which is sensory memory for visual information. Iconic memory was first studied by the psychologist George Sperling (1960). And this memory retains information that is gathered through sight.
- **Echoic memory** which is the sensory memory for sound. In contrast to iconic memory, which decays very rapidly, echoic memories can last as long as 4 seconds (Cowan, Lichty, & Grove, 1990). This is convenient as it allows you to remember the words that you said at the beginning of a long sentence when you get to the end of it, and to take notes on your psychology professor's most recent statement even after he or she has finished saying it this means that echoic memory retains information gathered through auditory stimuli.
- In some people, iconic or echoic memory seems to last longer than usual. For visual images, this phenomenon is known as **eidetic imagery**, having a photographic memory. People with a photographic memory can report details of an image over long periods of time. These people state that they can see an image long after it has been presented and can often report accurately on that image.
- **Haptic memory** retains data acquired through touch. It is the form of sensory memory specific to touch stimuli. Haptic memory is used regularly when assessing the necessary forces for gripping and interacting with familiar objects. It may also influence one's interactions with novel objects of an apparently similar size and density.

## 7.2.2 Short-term memory

Short-Term Memory (STM): Look up for a moment and note what attracts your visual attention. Try to identify the sounds and sensations that you are experiencing now. What have you identified is the content of short-term memory or STM. It holds relatively small amounts of information for brief periods of time, usually 30 seconds or less. This is the memory system we use when we look up the phone number and dial it. If we are connected on the first instance the telephone number is forgotten. However, if we get the line engaged for some time, we keep on dialing the number and through repeated dialing rehearsal of the telephone number we push it to the long-term memory (LTM) storage.

However, it has been found that short-term storage is more than a passive “holding area” (e.g. holding a telephone number). On the contrary, it involves active processing of information. This finding has led psychologists to use the term working memory. It means that something active goes on during the short-term memory.

Most of the information that gets into sensory memory is forgotten, but information that we turn our attention to, with the goal of remembering it, may pass into short-term memory. Short-term memory (STM) is the place where small amounts of information can be temporarily kept for more than a few seconds but usually for less than one minute (Baddeley, Vallar, & Shallice, 1990). [9] Information in short-term memory is not stored permanently but rather becomes available for us to process, and the processes that we use to make sense of, modify, interpret, and store information in STM are known as **working memory**.

Working memory is not a store of memory like STM, but rather a set of memory procedures or operations. It is a limited capacity memory system in which information is retained for as long as thirty seconds (the duration of short-term memory seems to be between 15 and 30 seconds), unless the information is rehearsed or otherwise processed further, in which case it can be retained longer. Compared to sensory-memory, short-term memory is limited in capacity but relatively longer in duration. Short-term memory is also called working memory; it contains what you are consciously aware of at any given moment.

Short term memory has three key aspects:

- Limited capacity (only about 7 items can be stored at a time).
- Limited duration (storage is very fragile, and information can be lost with distraction or passage of time).
- Encoding (primarily acoustic, even translating visual information into sounds).

### 7.2.3 Long-term memory

Long – Term Memory (LTM): It refers to the memory system for the retention of large amounts of information for long periods of time. It is the memory system that permits us to remember events that happened many years ago, yesterday, last year, and so on. It is the long-term memory that allows us to remember factual information making it possible for us to learn different subjects, appear for examinations and communicate with others. It brings continuity and meaning to our life.

When we pay attention to a piece of information and engage in active rehearsal the material is stored in the long-term memory (LTM). Information in sensory memory enters short-term memory when it becomes the focus of our attention. If we do not pay attention to the incoming sensory information, the material fades and quickly disappears. We tend to pay attention to certain information and not to the other. Paying attention to certain aspects of our world is what we call. “selective attention”. The information from STM is often rehearsed by us. This rehearsal helps the transfer of that information from STM to LTM.

It is a type of memory that holds enormous amounts of information for a long period of time in a relatively permanent fashion. In this model, sensory input goes into sensory memory. Through the process of attention, information moves into short-term memory, where it remains for 30 seconds or less, unless it is rehearsed. Then, the information goes to long-term memory storage; from here, it can be retrieved for some purpose later.

If information makes it past short term-memory it may enter long-term memory (LTM), the memory storage that can hold information for days, months, and years. The capacity of long- term memory is large, and there is no known limit to what we can remember (Wang, Liu, & Wang, 2003). Although we may forget at least some information after we learn it, other things will stay with us forever.

## 7.2.4 Nature of three systems of memory

The nature of the three systems of memory is explained in this table

Table 11: Nature of three systems of memory.

Characteristics	Sensory Memory	Short-term Memory	Long-term Memory
Duration	Iconic about ½ sec Echoic about 2 sec	20 seconds	Life time
Capacity	Large	$7 \pm 2$	Unlimited
Forgetting	Trace decay	Decay, interference and displacement	Interference, Decay Lack of Cues
Encoding	Sensory (visual) (auditory)	Phonological or visual-semantic	Semantic and sensory
Retrieval	Parallel search	Serial exhaustive search	Parallel distributed search



### Application activity 7.2

- Complete using appropriate words:
  - Iconic memory is sensory memory for ..... Information.
  - Echoic memory is the sensory memory for .....
  - Haptic memory is sensory memory which retains data acquired through .....
- Explain the progression from sensory memory to short term memory and to long term memory?
- How are memories organised in long-term memory?
- Suggest the main characteristics of long-term memory?

## 7.3. Implicit memory

### Learning Activity 7.3



Long term memory has two main forms and one of them doesn't require any conscious retrieval.

- Which one is it?
- What type of memory is implicit?
- What is another name for implicit memory?
- What controls implicit memory?

**Implicit/non declarative memory** refers to knowledge that we cannot consciously access. However, implicit memory is nevertheless exceedingly important to us because it has a direct effect on our behavior. There are three general types of implicit memory: Procedural memory, Classical conditioning effects, and Priming.

**Procedural memory:** This deals with memory for actions or ways of doing certain things or performing certain activities. It refers to our knowledge of how to do things. When we walk from one place to another, speak to another person in English, dial a cell phone, or play a video game, we are using procedural memory.

Procedural memory allows us to perform complex tasks, even though we may not be able to explain to others how we do them. There is no way to tell someone how to ride a bicycle; a person has to learn by doing it. The idea of implicit memory helps explain how infants are able to learn. The ability to crawl, walk, and talk are procedures, and these skills are easily and efficiently developed while we are children despite the fact that as adults we have no conscious memory of having learned them.

A second type of implicit memory involves **the effects of classical conditioning (associative, non-associative)** in which we learn, without effort or awareness, to associate a neutral stimulus with another stimulus that creates a naturally occurring response. The memory for the association is demonstrated when the conditioned stimulus begins to create the same response as the unconditioned stimulus did before the learning. For example, you may learn to associate the sounds in a restaurant (CS) with food (US), that naturally results in enjoyment (UR). When you enter a restaurant and hear the sounds (CS), the same response of enjoyment (CR) is experienced.

The final type of implicit memory is known as **priming**, or changes in behaviour as a result of experiences that have happened frequently or recently. Priming refers both to the activation of knowledge and to the influence of that activation on behaviour. For example, we can prime the concept of “kindness” by presenting people with words related to kindness. We can then assess if people who are primed, actually act more kindly.

Our everyday behaviours are influenced by priming in a wide variety of situations. Seeing the flag of our home country may arouse our patriotism, and seeing a rival school may arouse our competitive spirit. Moreover, these influences on our behaviours may occur without our being aware of them.

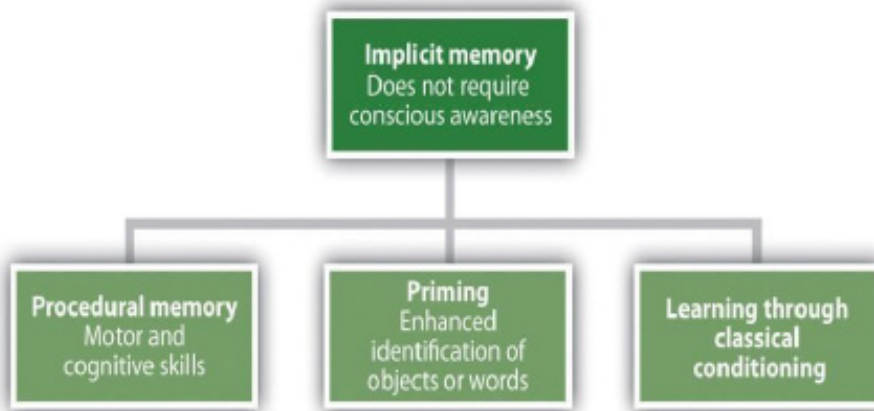


Figure 13: Implicit memory



### Application activity 7.3

1. What do you understand by implicit memory?
2. Provide examples of implicit memories.
3. Differentiate three types of implicit memory.

## 7.4. Explicit/Declarative Memory



### Learning Activity 7.4

Long term memory has two main forms and one of them requires conscious retrieval of information when trying to remember.

1. Which one is it?
2. Explain it in few words?
3. What is another name for it?
4. What type of memory is explicit?

### 7.4.1 Explicit memory explained

When we assess memory by asking a person to consciously remember things, we are measuring **explicit memory**. Explicit/declarative memory refers to knowledge or experiences that can be consciously remembered. there are two types of explicit memory: **episodic and semantic**.

Episodic memory refers to the first-hand experiences that we have had. For example, recollections of our high school graduation day or sixteenth birthday. Semantic memory refers to our knowledge of facts and concepts about the world. For example, the absolute value of 90 is greater than the absolute value of 9 and one definition of the word “affect” is the experience of feeling or emotion.

Explicit memory is assessed using measures in which the individual being tested must consciously attempt to remember the information. A recall memory test is a measure of explicit memory that involves bringing from memory information that has previously been remembered. We rely on our recall when we take an essay test, because the test requires us to generate previously remembered information. Free recall is a measure of memory with no prompts or clues.

Cued recall includes a retrieval cue in the request for memory. Fill-in the blank questions use cued recall. A multiple-choice test is an example of a recognition memory test, a measure of explicit memory that involves determining whether information has been seen or learned before.

Your own experiences taking tests will probably lead you to agree with the scientific research finding that recall is more difficult than recognition. Recall, which is required on essay tests, involves two steps: first generating an answer and then determining whether it seems to be the correct one. Recognition, which is required on multiple-choice tests, only involves determining which item from a list seems most correct (Haist, Shimamura, & Squire, 1992). Although they involve different processes, recall and recognition memory measures tend to be correlated. Students who do better on a multiple-choice exam will also, by and large, do better on an essay exam (Bridgeman & Morgan, 1996).

A third way of measuring memory is known as relearning (Nelson, 1985). Measures of relearning assess how much more quickly information is processed or learned when it is studied again after it has already been learned, but then forgotten. If you have taken some French courses in the past, for instance, you might have forgotten most of the vocabulary you learned.

However, if you were to work on your French again, you would learn the vocabulary much faster the second time around. Relearning can be a more sensitive measure of memory than either recall or recognition because it allows assessing memory in terms of how much or how fast rather than simply correct versus incorrect responses. Relearning also allows us to measure memory for procedures like driving a car or playing a piano piece, as well as memory for facts and figures.

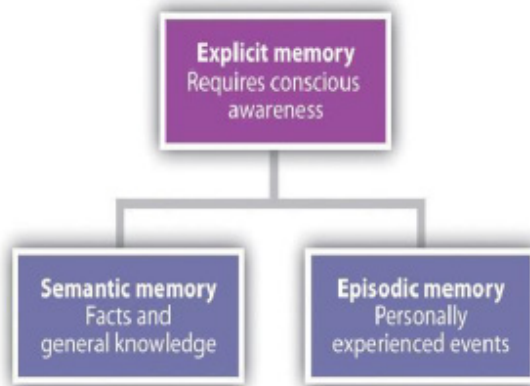


Figure 14: Explicit, Semantic and Episodic memories

- **Semantic:** This deals with knowledge, meaning and generalized experiences. Whatever we remember from books and information about world events and meanings of words are included in it.
- **Episodic:** It refers to the experiences which are personal to an individual. You do so many things in a day. They are your unique experiences. Memory of such experiences are accessible by you only. They are part of your episodic memory.

### 7.4.2 Memories as Types, processes and Stages

As you can see in table “Memory Conceptualized in Terms of Types, Stages, and Processes”, psychologists conceptualize memory in terms of types, in terms of stages, and in terms of processes. In this section we will consider the two types of memory, explicit memory and implicit memory, and then the three major memory stages: sensory, short-term, and long-term (Atkinson & Shiffrin, 1968). Then we will consider three processes that are encoding, storage, and retrieval.

### 7.4.3 Memory Conceptualized in Terms of Types, Stages, and Processes

Table 12: Types, stages and processes of memory

As types	Explicit memory	As processes	Encoding
	Implicit memory		Storage
As stages	Sensory memory		Retrieval
	Short-term memory		
	Long-term memory		



### Application activity 7.4

1. Explain types of explicit memory.
2. How can you conceptualise memory in terms of type, process and stages?
3. Which part of the brain is important for implicit memory processing and which parts are key role in explicit memory processing?

## 7.5. Interference theory and trace decay theories of forgetting



### Learning Activity 7.5

Many people ask themselves why some information is forgotten, and others can be retrieved while needed. Some of the causes are the following:

- Memory trace is created every time when a new memory is formed. This trace reinforces connections that assist in retaining the new memory in the brain. But if the memory is not recalled regularly, the trace will become weaker and weaker; leading to memory retrieval failure and in that way, information is forgotten.
- Information stored under similar categories tends to interfere with each other.

1. Which theories of forgetting that explains point a and b?
2. How can you differentiate them?

### 7.5.1 The interference theory

**The interference:** Information stored under similar categories tends to interfere with each other. There are two types of interference: proactive interference and retroactive interference. This means that in some cases, our existing memories influence our new learning. This may occur either in a backward way or a forward way. Retroactive interference occurs when learning something new impairs our ability to retrieve information that was learned earlier. For example, if you have learned to program in one computer language, and then you learn to program in another similar one, you may start to make mistakes programming the first language that you never would have made before you learned the new one. In this case the new memories work backward (retroactively) to influence retrieval from memory that is already in place.

Retroactive interference/ inhibition (retro=backward) (RI) in which new learning interferes in the memory of previously learnt material is a phenomenon that occurs when newly learned information interferes with and impedes the recall of previously learned information. RI is a result of decreased recall of the primary studied functions due to the learning and recall of succeeding functions.

In contrast to retroactive interference, proactive interference works in a forward direction. Proactive interference occurs when earlier learning impairs our ability to encode information that we try to learn later. For example, if we have learned French as a second language, this knowledge may make it more difficult, at least in some respects, to learn a third language (say Spanish), which involves similar but not identical vocabulary.

Proactive interference/ inhibition (pro = forward) (PI) in which the previous learning will interfere with the remembering of later learning. PI is the “forgetting [of information] due to interference from the traces of events or learning that occurred prior to the materials to be remembered”. It occurs when in any given context, past memories inhibit an individual’s full potential to retain new memories. It has been hypothesized that forgetting from working memory would be non-existent if not for proactive interference.

Chandler (1989) stated that students who study similar subjects at the same time often experience interference.

Previous learning can sometimes interfere with new learning (e.g. difficulties we have with foreign currency when travelling abroad). Also new learning can sometimes cause confusion with previous learning. (Starting French may affect our memory of previously learned Spanish vocabulary).

In summary Proactive interference happens when what we learn today interfere with what we will learn later (Past memories inhibit retention of new memories) and Retroactive interference happens when new learned information impedes the recall of information you learned earlier.

**Example:** Proactive and retroactive interference is thought to be more likely to occur where the memories are similar, for example: confusing old and new telephone numbers.

## 7.5.2 The Trace Decay Theory

This explanation of forgetting in short term memory assumes that memories leave a trace in the brain. A trace is some form of physical and/or chemical change in the nervous system. Trace decay theory states that forgetting occurs as a result of the automatic decay or fading of the memory trace. Trace decay theory focuses on time and the limited duration of short term memory.

This theory suggests short term memory can only hold information for between 15 and 30 seconds unless it is rehearsed. After this time the information / trace decays and fades away. It is learnt that the memory traces are responsible for our memory. These traces are also called as engrams. The memory traces are formed in our neurological systems. If the learnt processes are not used for a long time, the traces get faded. Hence, it is the lapse of time that is responsible for forgetting according to this theory.

**The decay theory:** it is the gradual disintegration of learnt information over time when it is not used. Thus, decay theory suggests that the passage of time is responsible for forgetting.

The trace decay theory was formed by American psychologist Edward Thorndike in 1914, based on the early memory work by Hermann Ebbinghaus. The theory states that if we don't access memories, they will fade over time.

When we learn something new, the brain undergoes neurochemical changes called memory traces. Memory retrieval requires us to revisit those traces that the brain formed when encoding the memory. The trace decay theory implies that the length of time between the memory and recalling determines whether we will retain or forget a piece of information. The shorter the time interval, the more we will remember, and vice versa.

Decay theory is an older memory theory proposed to explain the loss of information that has not been used over time from long-term memory. However, most current research does not support the concept of decay as a reason for the loss of information in long term memory. Instead, the prevailing belief is that, with the proper cues, memories can still be retrieved.

One way to prevent the decay of information from short-term memory is to use working memory to rehearse it. Maintenance rehearsal is the process of repeating information mentally or out loud with the goal of keeping it in memory. We engage in maintenance rehearsal to keep something that we want to remember (e.g., a person's name, e-mail address, or phone number) in mind long enough to write it down, use it, or potentially transfer it to long-term memory. If we continue to rehearse information, it will stay in STM until we stop rehearsing it, but there is also a capacity limit to STM.

The trace-decay theory states that a memory will fade away or disappear with the passage of time. According to this theory, a memory trace is created every time a new memory is formed. This trace reinforces connections that assist in retaining the new memory in the brain. But if the memory is not recalled regularly, the trace will become weaker and weaker, leading to memory decay and ultimately retrieval failure.

For example, regular use of a computer password keeps your memory trace strong. But, occasional use of the same weakens the memory trace, making it difficult to remember the password.

Scientists have identified that changes occur in the individual neurons and brain circuits when we remember something. Neurons communicate with each other at the synapse and memory involves changes to the molecular structure of neurons at the synapse. However, research, so far, is limited to simple neuronal circuits, and the mystery behind neuronal changes involved in complex types of memory such as memories for facts and events has not yet been completely unraveled.



### Application activity 7.5

1. What do you understand by memory trace?
2. You will experience less .....(proactive/retroactive) interference if you learn new material in the hour before sleep than you will if you learn it before turning to another subject.
3. Decay theory of forgetting suggests that short term memory can only hold information for between ..... (15 and 30 seconds, 10 and 20 seconds, 15 and 20seconds) unless it is rehearsed.
4. Distinguish between proactive interference and retroactive interference?
5. Describe trace decay theory of forgetting?
6. Suggest one way which can be used to prevent the decay of information from short-term memory?

## 7.6. The retrieval failure/cue dependent theory of forgetting



### Learning Activity 7.6

1. We can compare forgotten events to books you can't find in your local library. Some aren't available because they were never acquired (not encoded). Others have been discarded. But there is a third possibility the book or memory may be out of reach because we don't have enough information to access it.
2. Which theory of forgetting is described in the above statement? Who developed that theory?
3. What do you think can be the main reasons that can lead to forgetting because of the theory said in point 1?

## 7.6.1 Retrieval Failure Theory

Some psychologists maintain that forgetting can be explained by the inability to retrieve from memory, rather than by simple memory loss, distortion, suppression, or interference. In other words, individuals don't appear to remember simply because of what is termed retrieval cue failure. The "retrieval cue failure" refers to the inability to recall an item of information from memory.

- Retrieval failure is where the information is in long term memory but cannot be accessed.
- Such information is said to be available (i.e. it is still stored) but not accessible (i.e. it cannot be retrieved).
- It cannot be accessed because the retrieval cues are not present.
- When we store a new memory, we also store information about the situation and these are known as retrieval cues.
- When we come into the same situation again, these retrieval cues can trigger the memory of the situation.

### **Retrieval cues can be:**

- i) External / Context - in the environment, e.g. smell, place etc.
- ii) Internal / State- inside of us, e.g. physical, emotional, mood, drunk etc.

We've all experienced retrieval failure in the form of the frustrating tip-of-the-tongue phenomenon, in which we are certain that we know something that we are trying to recall but cannot quite come up with it.

The retrieval failure theory was developed by the Canadian psychologist and cognitive neuroscientist Endel Tulving in 1974. According to this theory, forgetting often involves a failure in memory retrieval. Although the information stored in the long-term memory is not lost, we are unable to retrieve it at a particular moment. A classic example is the tip of the tongue effect when we are unable to remember a familiar name or word.

There are two main reasons for failure in memory retrieval. Encoding failure prevents us from remembering information because it never made it into long-term memory in the first place. Or the information may be stored in long-term memory, but we can't access it because we lack retrieval cues.

Retrieval failure theory of forgetting is also known as cue-dependent forgetting. Cue-dependent forgetting: fail to find an adequate cue to activate the relevant portion of the knowledge stored in semantic memory. The notion of cue-dependent forgetting can explain why a student might fail to retrieve a needed fact for an exam or even when he is sure he "knows" the information.

Researchers suggest sometimes information cannot be retrieved in the absence of a suitable cue to trigger the memory. Memories often cannot be retrieved spontaneously but need elements that were available when the memory was encoded.

In a study, two groups of participants were asked to remember a long list of words. While one group was asked to remember the words, the other group was given cues about the categories to be remembered. The outcome suggested that the group that received retrieval cues remembered more words than the one which received none. This study demonstrates that we have much more information in the memory than we think but need the right cue to trigger the memory. For instance, after seeing your house and street where you lived as a six-year-old, you are flooded with forgotten memories. Though you hadn't thought about those for many years, memories were triggered by a cue.

### 7.6.2 Retrieval cues

A retrieval cue is a trigger that helps us remember something. When we create a new memory, we also retain elements of the situation in which the event occurred. These elements will later serve as retrieval cues. Information is more likely to be retrieved from long-term memory with the help of relevant retrieval cues. Conversely, retrieval failure or cue-dependent forgetting may occur when we can't access memory cues.

Some examples of retrieval cues are:

- **Semantic cues:** Semantic cues are associations with other memories. For example, we might have forgotten everything about a trip we took years ago until we remember visiting a friend in that place. This cue will allow recollecting further details about the trip.
- **State-dependent cues:** State-dependent cues are related to our psychological state at the time of the experience, like being very anxious or extremely happy. Finding ourselves in a similar state of mind may help us retrieve some old memories.
- **Context-dependent cues:** Context-dependent cues are environmental factors such as sounds, sight, and smell. For instance, witnesses are often taken back to the crime scene that contains environmental cues from when the memory was formed. These cues can help recollect the details of the crime.



### Application activity 7.6

- With examples explain what you understand by retrieval cue.
- Explain retrieval failure theory of forgetting.
- Distinguish state-dependent forgetting from context-dependent forgetting.

## 7.7. Repression theory and displacement from short term memory



### Learning Activity 7.7

1. While some information reaches long-term memory, other pieces of information in short-term memory storage are simply forgotten and are replaced by others.
  - a) Which theory of forgetting is described above?
  - b) What pieces of information are displaced?
  - c) What pieces of information are kept in that place?
2. Student Kalisa does not want to remember the name of a teacher who has severely “punished him in his school days.”
  - a) Which theory of forgetting is that?
  - b) Who developed that theory?
  - c) Provide examples of memories that people do not wish to remember?

### 7.7.1 Displacement theory

It seeks to explain forgetting in short term memory and suggests it's due to a lack of availability. Displacement theory provides a very simple explanation of forgetting. Because of its limited capacity, suggested by Miller to be  $7 \pm 2$  items, STM can only hold small amounts of information. When STM is 'full', new information displaces or 'pushes out' old information and takes its place. The old information which is displaced is forgotten in STM. It was also assumed that the information that had been in the short-term store for the longest was the first to be displaced by new information.

The displacement theory describes how forgetting works in short-term memory. Short-term memory has a limited capacity and can only hold a small amount of information—up to about seven items—at one time. Once the memory is full, new information will replace the old one.

There seems to be no one figurehead of this theory, but many psychologists have contributed to experiments and studies that support it. Free recall method studies often support the idea of the displacement theory of forgetting. This theory is pretty solid and has stood the test of time.

Displacement theory plays neatly into the Multi-Store Model of Memory. This model shows that while some information reaches long-term memory, other pieces of information in short-term memory storage are simply forgotten.

### **7.7.2 The Repression/motivation theory**

Repression is a defensive mechanism. As explained by Freud in his theory of psychoanalysis, the painful experiences and forbidden wishes are pushed into unconscious and the individual does not want to remember them. Though they try to come to conscious level they are pushed back or avoided consciously. This is a purposeful or motivated forgetting.

We forget those memories which we do not want to remember. For example, a student does not want to remember the name of a teacher who has severely “punished him in his school days.

Sigmund Freud originally developed the concept of repression as part of his psychoanalytic theory. Repression occurs when a thought, memory, or feeling is too painful for an individual, so the person unconsciously pushes the information out of consciousness and becomes unaware of its existence. Friedrich Nietzsche was one of the first psychologists to suggest that people intentionally forgot their memories. Typically, these memories are traumatic or shameful.

This theory really took off when Freud expanded upon this theory. Freud spoke more about the idea that people unintentionally forgot their memories. This process is called repression and is considered a defense mechanism. Freud, however, believed he could recover repressed memories. Today, psychologists mostly discredit this idea, as the mind can “change” memories with leading questions and other methods. Still, this motivated theory of forgetting is an important idea in the history of psychology.



### Application activity 7.7

1. Short term memory has a ..... (Limited, unlimited) capacity of storage.
2. Describes how forgetting works in short-term memory.
3. What happens during repression?
4. What are three ways we forget and how does each of these happen?

## 7.8. Strategies for enhancing memory



### Learning Activity 7.8

It may be difficult to remember all of the new information that you have learned, but there are many techniques out there that can help you improve your memory, enhance recall, and increase retention of information. Suggest some of them.

#### 7.8.1 Useful strategies

##### 1. Understand the material/ deep processing

Before you even start memorizing your study material, you need to understand it. do this by finding a connection between your study materials and something you have already experienced. The more you can relate the material to what you already know, the easier it is to learn and remember.

If you want to learn something and wish to enter information into long-term memory, you have to think about it. You need to consider its meaning and examine its relationship to information you already have. Careful planning, considering the meaning of information, and relating it to existing knowledge is helpful in learning it and remembering it later. The retention of material is dependent directly upon the depth at which it has been processed. Deeper level in terms of meaning is very important. Second, the depth of processing also refers to the rehearsal of material to be remembered. Greater the rehearsal, more the chances of recalling the material later.

## **2. Organize your learning material**

Understanding a concept becomes easier when you understand where it fits in the bigger picture. This means grouping related concepts together. You can do so by showing the relationships between items using graphic methods such as Venn diagrams and mind maps. This strategy also helps you to understand each concept's relevance.

## **3. Attending carefully**

If you want to learn something well and ensure its retention in long-term memory you have to put in conscious effort to attend to it carefully.

## **4. Have the right study environment**

Paying attention is incredibly important when studying. Without paying attention, you will not be able to process the concepts you are learning. Something that greatly affects your attention is the environment in which you are studying. Make sure you study in an environment that is free from distractions such as television, music, and loud talking. This also means not being distracted by other people. If you have a roommate, you may want to ask them to give you some privacy. If you have children, ask your partner or a friend if they could take them out so that you can focus on your work.

## **5. Minimize interference:**

You have learned that interference is a major cause of forgetting and you should try to reduce it as much as possible. In general, the more similar the materials to be learned, the more likely they will produce interference. Thus, you should arrange your studies so that you don't study similar subjects one right after the other. For example, if you have to study two languages, study them on different days.

## **6. Distributed practice/ Spacing effect:**

While learning some material it is beneficial to learn it using distributed practice in which there is a gap between trials. Take rest after a period of study. If the chapter is lengthy, divide it into two or three parts and learn a part in one go. After mastering one part then go to the second and so on. Do not try to cram all the information you want to memorize at once.

This strategy refers to improved learning when the same amount of studying is spread out over periods of time, then when it occurs closer together, known as massed practice. This means that you will learn more if you study a little bit every day throughout the semester than if you wait to cram at the last minute.

## **7. Space out your work**

Make sure that you do not cram too much work into one study session. When scheduling your study slots, stretch out your work over numerous days. Be sure to only focus on small quantities of material at a time. The fewer new concepts you need to learn in each study session, the easier it is to remember the information.

## **8. Using memory aids**

People use various cues, indicators and signs to connect events. This often facilitates remembering. You can use visual imagery to remember objects and places. For example, if you visit a new place, you can remember the location by remembering several associated objects and places. You may remember the place to be close to a cinema hall, in front of a signal post and so on.

## **9. Use mnemonic methods**

Come up with a rhyme, joke, or song to remember some concepts. If the method you use is catchy, it will become much easier to remember the concept. It is also easier to remember concepts when they are associated with something you are familiar with.

## **10. Think in pictures and colours**

Many people are visual learners. If you are, try to visualize the material that you are studying. You can do so by paying attention to the photographs and other graphics that appear in your textbook. If there are no graphics in your textbook, you can make graphics of your own. Draw pictures and diagrams to accompany your notes or use different colors to highlight important points and group related concepts together. Using pictures and colors can make seemingly boring material more interesting and memorable.

## **11. Repetition**

As the saying goes, practice makes perfect! In order to truly master a new concept or skill, you need to practice it over and over again. Doing so will help you store this material in your long-term memory. You can practice this material in several ways, including writing, saying, or drawing the information.

## **12. Talk about what you've learned**

Just like you have visual learners, there are also people who learn through talking. Speak to a friend or family member about the concepts you've learned. By having a debate or a two-way discussion with them, you will be able to speak about the topic on a deeper level and develop a better understanding of it. There is also research that suggests that simply talking about the information aloud will help you memorize it, even if you do it alone.

### **13. Association**

If the material is unfamiliar, think about how it relates to things that you already know. Try to establish a connection between the study material and people, places, situations, or feelings that you are already familiar with. This gives the new material context and make it easier to remember as you think about the things that you are already familiar with.

### **14. Storytelling**

Write a story focusing on the key points of what you're learning. As you write the story, arrange what you've learned in a logical sequence so that you do not miss anything out. When you retell the story, each part of it will trigger your memory and remind you of what comes next.

### **15. Acronyms/shorthand code**

An acronym is a word that is made up of the first letters of a group of words. If you have a list of terms that you need to remember, making an acronym is an effective study technique. By using an acronym, you will immediately be reminded of the first letter of each term, thereby making it easier to remember the entire list.

### **16. Overlearning:**

That is, continuing to practice and study even when we think that we have mastered the material.

### **17. Vary your study routine**

Studying in the same place at the same time during each study session can become tedious. In order to maintain your attention, you may want to add novelty to your study sessions. This could be done by changing the location where you study or studying at a different time of day. This will make it easier to recall information.

### **18. Play games:**

Playing games makes learning fun. You can use games to help you memorize facts, formulas, or even events. As you play the game, you will continue to revise the material again and again. You will also have fun socializing with friends while doing so!

### **19. Chunking**

It is easier to memorize information by only learning a small chunk of it at a time. If you have to learn history, break up the course content into time periods. If you are learning a new language, then group words together into categories, such as household items or sports. Even if there is no distinct pattern, break your study material up into smaller groups in order to make it easier to memorize.

## 20. Funny sentences

If you find yourself needing to remember an unfamiliar word, use the letters that make up the word to form a silly sentence. By making a sentence that is easy to remember, you can, therefore, recall the letters of the difficult word that you needed to memorize. This technique will also help you to spell the word correctly.

## 21. Elaboration

This is whereby you try to remember a detail by assigning further meaningful information to it. A good example of this is where you need to remember a combination of numbers, and so you come up with ways to remember each digit. For example, one part of the number might be your year of birth, while another digit might represent how many children you have.

## 22. Get enough sleep

Research suggests that getting enough sleep is important for retaining information more effectively. It is, therefore, a good idea to take a nap after learning a new concept for the first time. Make sure that you also get enough sleep at night, as this can affect your energy levels for the next day.

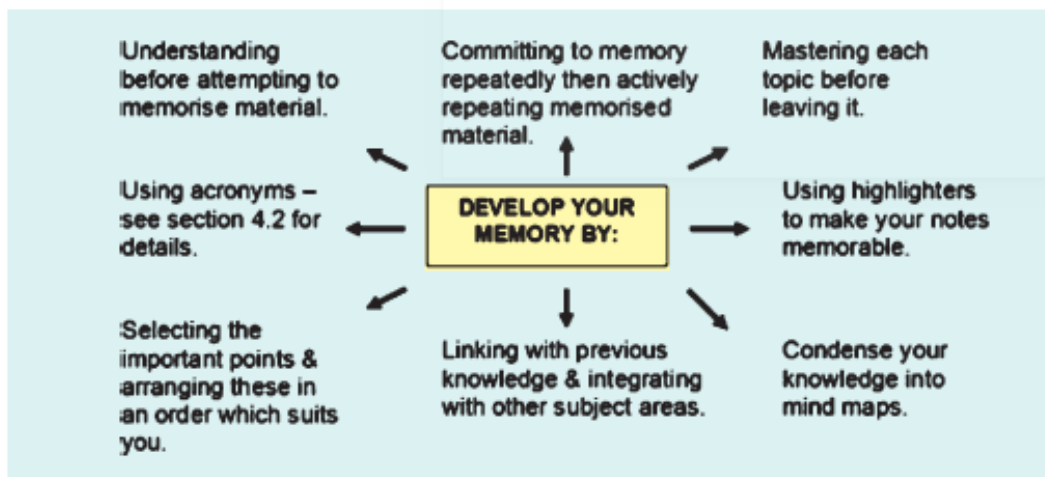


Figure 15: Actions of memory development

## 7.8.2 Helpful memory techniques based on psychological research

Table 13: Helpful memory techniques based on psychological research

Technique	Description	Useful example
Use elaborative encoding.	Material is better remembered if it is processed more fully.	Think about how new information relates to prior knowledge.
Make use of self-reference.	Material is better recalled if it is linked to thoughts about the self.	Connect new information about memory strategies to your study habits.
Be aware of the forgetting curve.	Information that we have learned drops off rapidly with time.	Review the material that you have already studied right before the exam to increase the likelihood it will remain in memory.
Make use of the spacing effect	Information is learned better when it is studied in shorter periods spaced over time.	Study a little bit every day; do not cram at the last minute.
Rely on overlearning.	We can continue to learn even after we think we know the information perfectly.	Keep studying, even if you think you already have it down.
Use context-dependent retrieval.	We have better retrieval when it occurs in the same situation in which we learned the material.	If possible, study under conditions similar to the conditions in which you will take the exam.
Use state-dependent retrieval.	We have better retrieval when we are in the same psychological state as we were when we learned the material.	Do not study under the influence of drugs or alcohol because they will affect your retrieval.



### Application activity 7.8

1. Which memory strategy is better explained in the following statement?
  - a) To memorize information by only learning a small chunk of it at a time
  - b) To group related concepts together by showing the relationships between items using graphic methods such as Venn diagrams and mind maps...

- c) To study in an environment that is free from distractions such as television, music, loud talking...
  - d) To do not cram too much work into one study session by scheduling your study slots and stretching out your work over numerous days.
  - e) To practice material over and over again
  - f) To write a story focusing on the key points of what you're learning.
2. Why is cramming ineffective?
  3. Why is it important to make new information meaningful?
  4. Which strategies are better for long term retention: cramming and rereading material or spreading out learning over time and repeatedly testing yourself ?

## 7.9. End Unit Assessment




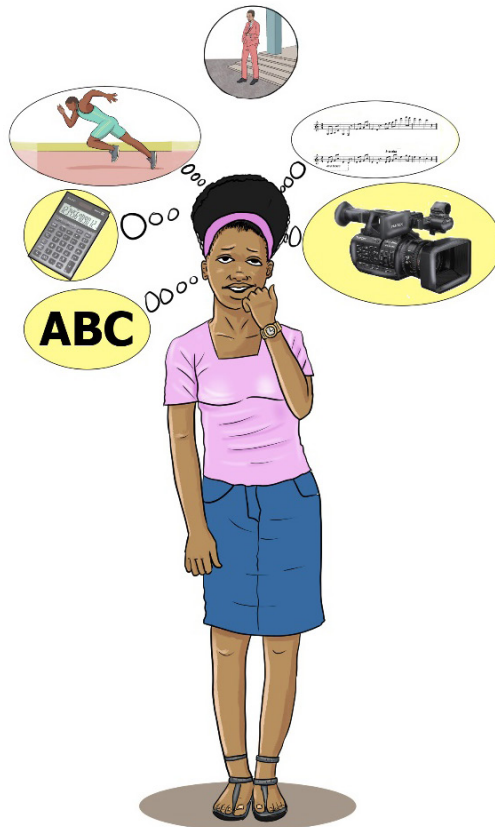
### End unit assessment

1. What is declarative memory and how does it differ from non-declarative memory?
2. Which information do we process automatically?
3. How does sensory memory work?
4. What are some effortful strategies that can help us remember new information?
5. a) What is the capacity of long-term memory?  
b) Are our long-term memories processed and stored in specific location?
6. Your friend has experienced brain damage in an accident. He/she can remember how to tie his/her shoes but has a hard time remembering anything you tell him/her during a conversation. How can implicit versus explicit information processing explain what is going on here?

# Unit 8

## INTELLIGENCE

 **Key unit competence:** Assess how intelligence impacts human behaviors.



### Introductory activity

Kalisa and Kamana are students coming from the same family; they have same facilities and learn in the same conditions. However, two students don't perform equally in their learning.

What do you think could be the origin of that difference?

## 8.1. Key terms related to intelligence

### Learning Activity 8.1



Create a mind map and write all words do you know that may be related to intelligence.

#### 8.1.1. Introduction to intelligence and its concepts

You often come across the term intelligence in everyday life. We generally use this term whenever we find somebody doing something very good which goes beyond our expectation. Intelligence is one of the psychological terms used quite frequently in various settings (e.g. school). Who can be called 'Intelligent'? The one who gets highest marks in exams? That person who earns many educational degrees? Is the doctor more intelligent, or the engineer or the lawyer or the artist? One may answer these questions in different ways depending on the meaning of intelligence. Intelligence is much more than getting degrees.

Intelligence refers to “multifaceted abilities of people”. It gets expressed in many ways. It comes in many forms. Some people are good in studies, some are good in repairing machines, some are good in acting and some are great in sports. People are very good in one subject and average in some other. The most important thing is that ‘intelligence’ is ‘functional’. It is ‘used’ to do something and to achieve something.

#### 8.1.2. Concepts of intelligence

##### Intelligence

In psychology, the term intelligence has been defined in many ways. One of the earliest definitions of intelligence was given by Binet and Simon in 1905 who defined intelligence as the “ability to judge well, to understand well, and to reason well”. One of the popular definitions of intelligence was given by Wechsler who defined it as “the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with the environment”.

Gardner defined intelligence as “the ability or skill to solve problems or to fashion products which are valued within one or more cultural settings”. He used the term ‘Multiple Intelligences’ and advocated that there are eight types of intelligences such as Linguistic, Logical mathematical, Spatial, Musical, Bodily-kinaesthetic, Interpersonal, Intrapersonal, and Naturalistic.

According to David Wechsler (1944) "Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment". Gardner Howard (1983) defined intelligence as "the ability to solve problems, or to create products, that are valued within one or more cultural settings.

An intelligent person is able to learn, adapt to new situations, think, rationally and abstractly. Therefore, intelligence is defined as the capacity to understand the world, think rationally, and use resources effectively when faced with challenges or new situations.

There are salient differences between intelligence, aptitude, and achievement. Intelligence relates to the ability of a person to do certain thing at a given time. Aptitude refers to the potential ability of an individual to perform a task, which generally consists of a combination of abilities. Achievement involves performance at any given point of time in a particular subject (e.g. mathematics) with which you have been made familiar.

**Intellect:** Intellect is the ability to understand and to think in an intelligent way.

**Intellectuality:** Intellectuality is the ability to learn and understand or to deal with problems.

**Ability:** Ability, commonly known as intelligence, represents one of the most important sources of individual differences. Ability is the innate capacity to act and helps in the solution of a problem. Environment can develop abilities but cannot produce them within the person. Abilities help to accumulate knowledge but those should not be confused with knowledge itself. These abilities increase efficiency in the person.

**Aptitude:** Aptitude refers to the ability to learn a particular kind of skill required in a specific situation.

**Thinking:** Thinking is a complex mental process which involves manipulation of information. Such information is collected through our senses (such as vision, hearing, smelling etc) from the environment, or is based on information which is stored in our memory because of our encounter with many events and situations in the past.

**Sensation:** Sensation is the process by which neural impulses are created by stimulation or sensory neurons that results in awareness of conditions inside or outside our body.

**Perception:** Perception is the process through which an internal representation of an object is formed. It involves synthesis of simple sensations and assigning meaning to the whole.

**Reasoning:** The process of thinking about something in order to make a decision.

**Mind:** The inner thoughts, feelings, and memory's person or animal has.



### Application activity 8.1

Define intelligence, ability and aptitude.

## 8.2. Brief history of intelligence



### Learning Activity 8.2

Make a research on internet to find out the first people to talk about intelligence.

The first people to ponder the nature of intelligence were not psychologists or educators, but philosophers. The Ancient-Greek philosopher Plato likened people's intelligence to blocks of wax, differing in size, hardness, moistness, and purity. A person whose block of wax was overly hard or soft and muddy or impure would suffer intellectual deficits. Thomas Aquinas, writing in the thirteenth century CE, believed the comprehension skills of intelligent people to be more nearly complete and universal than those of unintelligent people. According to Aquinas, however, even the most intelligent person could not approach the omniscience God.

The eighteenth-century philosopher Immanuel Kant believed that there are different kinds of intelligence or perhaps different facets of intelligence, and that people clearly differed in the degree to which they possessed them. These (and many other) early philosophical explorations of the human intellect foreshadowed the explosion of intelligence research that would occur in the twentieth century. Even though ideas about the nature of intelligence have existed for thousands of years, much of what we know about intelligence has been discovered since the late nineteenth century. We turn now to the implicit metaphors that appear to have guided scholarly exploration into the nature of intelligence, both historically and in modern times (Sternberg, 1990).



### Application activity 8.2

Describe the believe of Immanuel Kant about intelligence.

## 8.3. Theories of intelligence (Sternberg's triarchic)

### Learning Activity 8.3



Analyse this sentence 'intelligence cannot be viewed as a single entity'.

Do you agree with this idea? Make a research on internet to justify your answer. Find a theory corresponding to your answer.

### 8.3.1. Sternberg's triarchic theory of intelligence

Among other theories of intelligence is a theory proposed by Robert Jeffrey Sternberg (born in 8th December, 1949), an American psychologist from Yale university. He is a new generation cognitive psychologist who attempts to understand the cognitive processes involved in solving problems. Sternberg defined human intelligence as the cognitive ability to learn from experience, to reason well, to remember important information, and to cope with the demands of daily living. Thus, it involves reasoning, problem-solving ability, knowledge, memory and successful adaptation to one's surroundings (Sternberg, 2004). He viewed intelligence as how well an individual deals with environmental changes throughout their life span.

Sternberg (1988) formulated the 'triarchic theory of intelligence' which theorizes that there are three types of intelligence such as (a) Componential or analytical intelligence, (b) Experiential or creative intelligence, and (c) Contextual or practical intelligence.

**1. Componential or analytical intelligence** refers to the ability to break down the problem into components and analyze things for problem –solving. It refers to the internal mechanisms used in problem solving. It reflects the traditional conceptualization of intelligence and relates more to the academic achievement. It is also called as being 'book smart'. They are good in problem solving and abstract reasoning.

Analytical intelligence or academic problem-solving skills consists of three components such as meta components, performance components and knowledge acquisition components. Meta components are the executive part which controls the other two components. They control and monitor the cognitive processing. They tell the performance components what to do. Performance components help in performing a task or solving a problem. Thus, it uses attention, coding, memory etc. Knowledge acquisition components help in acquiring knowledge and uses different strategies for it.

**2. Experiential or creative intelligence** refers to new ways of problem solving by engaging in divergent thinking. It uses prior knowledge and experience to come up with new ideas and solve problems. It includes two components: Automation and novelty. Automation means some aspects of information processing are automated, they do not require much attention, effort or energy. They can run parallel to other processes. This enables the individual to use cognitive resources for coming up with novel/ new ideas.

**3. Contextual or practical intelligence** refers to the ability to use information to function effectively in life. It is also known as 'street smart' or being high on 'common sense'. It is the ability to understand and deal with everyday situation and events successfully. It is the ability to adapt, adjust and change depending on the contextual requirements. Thus, they can handle real life problems. It includes the components/sub theories of adaptation, shaping and selection. As Sternberg states, "Intelligence is purposive adaptation to, shaping of, and selection of real-world environments relevant to one's life" (Sternberg, 1984, p.271).

Adaptation takes place when one makes changes within oneself to adjust to a new environment. For example, an intelligent person upgrades himself by learning new technologies to improve his employability. Shaping occurs when one changes one's environment according to his requirement. For example, the person may try to change the attitude of the employer or impress the selection committee. Selection is done when a completely new environment is replaced with the older ineffective one. For example, the person may do a new course and try for another field or migrate to a place where there is better job opportunity.

An important asset of this theory is to avoid defining intelligence in terms of intelligence tests as in the case of analytical intelligence. Rather, contextual/practical intelligence focuses on performance in the everyday world.

### **8.3.2 Gardner's theory of multiple intelligences**

Howard Gardner (1983), an American Psychologist, proposed the theory of multiple intelligences. In his book 'Frames of Mind', he pointed out that he did not believe there was "one form of cognition which cut across all human thinking. There are multiple intelligences with autonomous intelligence capacities." So, intelligence cannot be viewed as a single entity. There are different types of intelligences which are independent of each other. Further, people may have varied combinations of these intelligences.

According to Gardner (1999), intelligence is much more than IQ as high IQ in the absence of productivity does not equate to intelligence. Gardner initially proposed eight types of intelligence which later on he increased to nine. Thus, Gardner views each individual as a unique combination of various intelligences, hence we cannot say that one is more intelligent, and another is less intelligent. Each one of us is talented in unique ways. The utility and value of each type of intelligence is culturally determined in the sense that individual's intelligent performance is determined according to the high desirability, usefulness and demands of society for particular at types of intelligence. For instance, one type of intelligence highly valued in a particular society may be of little significance in another.

Linguistic Intelligence refers to the ability to use language. It is the capacity to use spoken and written words in a skilled way. Individuals with high verbal/linguistic intelligence are very good in using words and language to express themselves, articulate things and create. They can use language fluently and flexibly and creatively. They can learn various languages easily. Poets, writers, lawyers, journalists, teachers, politicians, philosophers and speakers are very strong in this component of intelligence. Robert Frost, William Wordsworth, William Shakespeare, Gulzar, R.K. Narayan, Chetan Bhagat are some people high on linguistic intelligence.

Logical-mathematical Intelligence is the ability to use logical reasoning and mathematical ability. Individuals high on this intelligence have good abstract reasoning, critical thinking, and good in dealing with numbers. This type of intelligence correlates well with the traditional notion of intelligence. Scientists, engineers, physicist, economists are people with high logical-mathematical intelligence.

They are good in mathematics, calculations, numbers and computer programming. Albert Einstein, Archimedes, C.V. Raman and Amartya Sen are examples of people high in this area of intelligence.

Musical Intelligence is the ability to use rhythms, sounds and patterns to create, compose and perform music. It involves sensitivity to music, and the ability to recognise and manipulate musical patterns. People with high musical intelligence are likely to be singers, music composers, instrumentalists and musicians. Yehudi Menuhin, Ludwig van Beethoven, Michael Jackson, W.A. Mozart, M.S. Subhalaxmi, Lata Mangeshkar, R.D. Burman, Zakir Hussain are some examples of people with high musical intelligence.

Bodily-kinesthetic Intelligence is the ability to use and control one's body movements and actions. Dancers and sports persons are usually high in such intelligence. Further, it is also required in surgery and crafts making as it involves skills and dexterity for fine motor movements. People with high bodily-kinaesthetic intelligence can become good athletes, actors, sports persons, acrobats, yoga practitioners, surgeons, police officers and soldiers. Cricketers like Bradman, Tendulkar, dancer Pt. Birju Maharaj, Sonal Mansingh, Sanjukta Panigrahi, Madhuri Dixit, Rekha, acrobat Rosa Maria Ritcher, Olympic medallist P.T. Usha, Vijendra Singh demonstrate high bodily-kinaesthetic intelligence.

Spatial Intelligence is the capacity to perceive, understand and use spatial and visual information effectively. Such people are good in spatial orientation, forming visual images and patterns. They can easily visualise the world with the mind's eye, modify the surrounding based upon their perception and recreate aspects of their visual experiences.

They are good at remembering images, figures, faces, fine details and visualise things from different angles. People with high visual/spatial intelligence are likely to be architects, painters, interior designers, surgeons, pilots, drivers and sailors. M. F. Husain, Amrita Sher-gil, Michael Angelo, Leonardo da Vinci and I.M. Pei are examples of some people with good spatial intelligence.

Interpersonal Intelligence refers to the ability to understand others and social interactions. They can understand the emotions and the perspectives of others and relate well to others. They are able to establish good interpersonal relationships with others. They have good and effective communication skills. They also show sensitivity and empathic understanding towards others.

People with high interpersonal intelligence tend to be social workers, managers, psychologists, nurses, counsellors, politicians, leaders, teachers, reformers and spiritual gurus. Some examples of such people are Mother Teresa, Mahatma Gandhi, Sarvepalli Radhakrishnan, Raja Rammohun Roy, Sri Sri Ravi Shankar and Mata Amritanandamayee.

Intrapersonal Intelligence is the ability to understand oneself and know one's thoughts, emotions, feelings, motives and desires, and how these influence their behaviour. It includes awareness about one's strengths, limitations, goals and ambitions in life. Such intelligence includes one's introspective and self-reflective capacities. Such people are usually introverted, intuitive type, love to work alone and are least affected by any external events. Various people-oriented careers require intrapersonal intelligence, e.g., psychologists and spiritual leaders like Swami Vivekananda, Ramakrishna Paramahansa and Sri Aurobindo. Philosophers and writers also have strong intrapersonal intelligence.

Naturalistic Intelligence is the ability to recognize and understand the various patterns in nature. It includes sensitivity to the nature with all its features including flora, fauna and all the biodiversity. Gardner has added this eighth type of intelligence to his original seven intelligences.

Such people appreciate the beauty of nature and the subtle aspects of nature. Hunters, farmers, bird watchers, botanists, biologists, tourists and gardener are high in this aspect of intelligence. Charles Darwin, a naturalist and best known for his contribution to the science of evolution with his book '*On the Origin of Species*' is an example of a person with high naturalistic intelligence.

Existential Intelligence Gardner (1998) added existential intelligence as the ninth intelligence which refers to the sensitivity and capacity to tackle deep questions beyond sensory data and about human existence such as meaning of one's life, why have we 'big picture' in life and the ultimate truth of life. Cosmologists and philosophers are high on this aspect of intelligence. According to Gardner, each of these "intelligences" has a specific set of observable and measurable abilities. The first two abilities, i.e., linguistic and logical-mathematical intelligence, strongly contribute to the performance in traditional school system and in the academic achievement; usually promoted more in our societies.

The next three intelligences, namely, bodily-kinaesthetic, musical and spatial intelligence are usually associated with arts and is high among people like singers, musicians, dancers, athletes, architects, designers, actors and others who make the world beautiful with these capacities and skills. Our traditional school system usually ignores these intelligences, and thus many children high on these capacities do not get enough scope to pursue their interest. Gardner's theory suggests that equal focus should be given to other intelligences and for optimal use of one's potentials.



### Application activity 8.3

1. Describe 3 types of intelligence according to STERNBERG.
2. Differentiate multiple intelligences according to Gardner.

## 8.4. Theories of intelligence (Piaget's theory of theory of development)



### Learning Activity 8.4

Go back to the content of senior 4 and find out the stages of cognitive development according to Jean Piaget.

The development stage of intelligence in the Piagetian theory of intelligence, the stages of intellectual development play an important role. Piaget defined four main stages:

1. Sensory-motor stage, i.e. direct action upon environment,
2. Preoperational/pre-logical period during which cognitive behaviour is still influenced by perception activity. Actions are internalized via representations, but thought is still tied to perception; during this stage there proceeds the development of speech and of the ability to operate symbols and signs),
3. The stage of operations (logical thought), i.e. in this stage child is capable to reason in a way that is not dependent on immediate perceptual and motor actions (the stage of concrete operations),
4. The stage of logical formal operations (complete logical thought independent on context). During this stage operational grouping becomes invariant with respect to concrete objects of reasoning and they can be transferred into new context (in what monkeys fail).

Piaget believed the intelligence to be a mechanism (both on biological and on cognitive level) by the use of which an organism adapts to the environment, i.e. creates such the schemata of his activity or behaviour that allow him to be in an equilibrium with his environment. This equilibrium is a dynamic one, it is achieved by means of two global processes appearing in the different forms depending on the sphere of intellectual activity: assimilation and accommodation.

Assimilation consists in treating the output stimuli by the use of already created schemes of behaviour without their changing (because stimuli are familiar to or recognizable by an organism). But when the process of recognizing stimuli fails due to the insolvency of available schemata then the accommodation process comes forward and accommodation consists in changing schemata or inventing new ones to assimilate new stimuli.

Scheme is one of the main concepts of Piaget - it is a cognitive structure (or mental structure) by which the individual intellectually adapts to and organizes his environment. The organization of behaviour (sensory-motor, speech, cognitive and so forth) consists in constructing schemata of behavior. Scheme, according to Piaget, is absolutely not identical to the scheme of relation. Scheme is a dynamical union of a relation and operations by means of which this relation is constructed. Scheme determines the possibility of combining operations thus permitting to construct and reconstruct the typical sequences of operations in the typical situations.

Scheme, in any sphere of behavior, tends to the conservation of the organism's identity and thereby to the conservation of the organism's representation of the environment. For example, the sensory-motor intelligence constructs the schemata of real-world objects: the individual can do many different operations with objects - he (or she) can hide, throw, turn over an object. But with all these manipulations, an object remains identical to itself conserving its color, shape, size and so on.

The sensory-motor operations provide the flexibility for the motor behavior, for example, one can get an object by different ways, can come to it from different places in space.

The sensory-motor operations constitute a group which is invariant with respect to the set of all real objects, but any object is also invariant with respect to the group of sensory-motor operations. Piaget believed the mind to have structures much in the same way that the body does. Thus concepts as cognitive structures are invariant with respect to reasoning operations (for example, the multiplication and the addition of concepts (classes)): the different expressions of natural language can correspond to the same concept (for example, expressions "a river on the bench of which a bison has been killed" and "a river in Australia beginning in N and having the length of 3000 km" could refer to the same river. At the same time, the operations of reasoning are invariant with respect to all concepts a person operates on.

In the sense of the adaptive nature of intelligence we can give the following definition of reasoning: it is a mental activity which is expressed by means of language and tends to form in mind cognitive structures and to maintain (to conform) them in the equilibrium during the constant interaction with people and objects in reality.

Piaget asserted the existence of balance between the processes of assimilation and accommodation. Probably there is a criterion which does not allow one of these two processes to prevail over the other.

Intelligence, according to Piaget, is not an ability. It is a form of adaptation, leading to an equilibrium to which tend all the interactions between organism and his environment beginning with the set of biological, physiological, sensory-motor adaptations and ending with the highest form of adaptation - thinking. This continuous row of adaptations must be viewed to be constructed during the evolution process and by means of the laws of evolution. Each form of adaptation provides a more stable and widely spreading equilibrium. In the Piaget's theory, the major source of motivation for intellectual development is disequilibrium which can be thought of as "cognitive conflict" when expectations or predictions are not confirmed by experience.



### Application activity 8.4

1. Describe four stages of intelligence according to Jean Piaget.
2. Define 'scheme' as one of Piaget's concepts

## 8.5. Types of intelligence (Word Smart, Math Smart, Physically Smart, Music Smart and people smart)



### Learning Activity 8.5

List down the subjects you studied in primary and indicate one you performed well and explain why.

- Word Smart /Linguistic Intelligence is the capacity to use language, your native language, and perhaps other languages, to express what's in your mind and to understand other people.
- Math Smart / Mathematical Intelligence: is the capacity to use numbers effectively and reason well. Someone who has this kind of intelligence is able to see cause and effect really well; also, they are able to identify a problem and solve it right there on the spot.
- Physically Smart /Physical Intelligence is the ability to detect and actively manage the balance of key chemicals in our bodies so that we can achieve more, stress less, and live and work more happily.
- Music Smart /Musical Intelligence is the ability to distinguish the sounds around you and that one you have. The ability to make your own melody (music) and musically intelligent person is able to recognize, differentiate, transform, and express all kinds of musical forms.
- People smart /Interpersonal Intelligence is the ability to understand and interact effectively with others.
- Body smart / Bodily-kinaesthetic intelligence the is the capacity to use language, your native language, and perhaps other languages, to express what's in your mind and to understand other people.



### Application activity 8.5

With a clear example, explain when a person is said to be smart in intelligence.

## 8.6. Types of intelligence (Self-smart, Naturalistic, Existential, Visual-spatial)

### Learning Activity 8.6



Analyse the following scenario relating it to the intelligence.

Mwiza is able to distinguish her strengths and weaknesses and she appreciates the beauty of nature.

**Self-smart also called intra-personal intelligence** is self-knowledge and the ability to act adaptively on the basis of that knowledge. This intelligence includes having an accurate picture of oneself (one's strengths and weaknesses); awareness of intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem.

**Naturalistic Intelligence** is the ability to recognize and understand the various patterns in nature. It includes sensitivity to the nature with all its features including flora, fauna and all the biodiversity. Gardner has added this eighth type of intelligence to his original seven intelligences. Such people appreciate the beauty of nature and the subtle aspects of nature. Hunters, farmers, bird watchers, botanists, biologists, tourists and gardener are high in this aspect of intelligence. Charles Darwin, a naturalist and best known for his contribution to the science of evolution with his book 'On The Origin of Species' is an example of a person with high naturalistic intelligence.

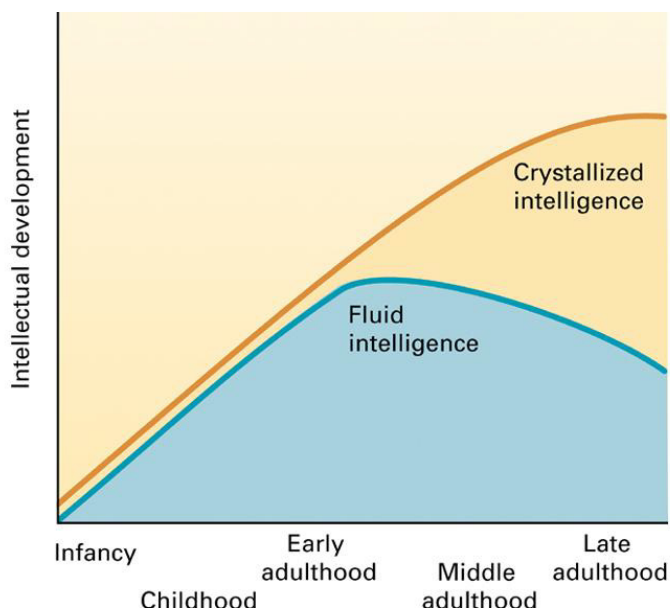
**Existential Intelligence:** Gardner (1998) added existential intelligence as the ninth intelligence which refers to the sensitivity and capacity to tackle deep questions beyond sensory data and about human existence such as meaning of one's life, why have we come to this world, why do we die, where do we go after death etc. It concerns the 'big picture' in life and the ultimate truth of life. Cosmologists and philosophers are high on this aspect of intelligence.

According to Gardner, each of these "intelligences" has a specific set of observable and measurable abilities. The first two abilities, i.e., linguistic and logical-mathematical intelligence, strongly contribute to the performance in traditional school system and in the academic achievement; usually promoted more in our societies. The next three intelligences, namely, bodily-kinaesthetic, musical and spatial intelligence are usually associated with arts and is high among people like singers, musicians, dancers, athletes, architects, designers, actors and others who make the world beautiful with these capacities and skills.

Our traditional school system usually ignores these intelligences, and thus many children high on these capacities do not get enough scope to pursue their interest. Gardner's theory suggests that equal focus should be given to other intelligences and for optimal use of one's potentials.

**Visual-Spatial Intelligence** is the capacity to perceive, understand and use spatial and visual information effectively. Such people are good in spatial orientation, forming visual images and patterns. They can easily visualise the world with the mind's eye, modify the surrounding based upon their perception and recreate aspects of their visual experiences. They are good at remembering images, figures, faces, fine details and visualise things from different angles. People with high visual/spatial intelligence are likely to be architects, painters, interior designers, surgeons, pilots, drivers and sailors.

Beside the previous described types of intelligence, we distinguish crystalized intelligence from fluid Intelligence. **Fluid intelligence** refers to the capacity to learn new ways of solving problems and performing activities quickly and abstractly, and **crystallized intelligence**, refers to the accumulated knowledge of the world we have acquired throughout our lives. Crystallized intelligence increases with age, while fluid intelligence tends to decrease with age. Simply, crystallized intelligence refers to the accumulated information and verbal skills, which increase with age while fluid intelligence refers to the ability to reason abstractly, which steadily declines from middle adulthood.



*Figure 16: Fluid and crystallised intelligence*



## Application activity 8.6

Describe the characteristics of a Visual-Spatial persons. What do they like to do as job?

## 8.7. Determinants of intelligence



### Learning Activity 8.7

Nziza and Mulisa are two primary 6 learners. Nziza' parents are teachers and they live in town. His parents use to buy him books to read at home. Mulisa's parents are farmers. They live in village. At school, Nziza perform better than Mulisa. What do you think could be the causes of this difference in their performance?

### 8.7.1 Heredity

Evidence from twin and adoption studies and selective breeding studies of animals, provide strong indications of the role of heredity in determining intelligence. There is clear evidence that, within the psychometric approach, intelligence is a lot more influenced by genetic inheritance than by the society's cultural inheritance.

Genetic studies upon human behaviour have shown that intelligence development is determined by the variations in hereditary inheritance to an extent of 40%-80%. Thus, monozygotic twins who were adopted at birth and raised in different social environments obtain an IQ result in the intelligence test similar to the one obtained by dizygotic twins who grew up together.

On the other hand, studies upon adopted children have shown that, in the majority of cases, the IQ of the biological parent is a better predictor for the IQ of the child than the IQ of the foster parent. Therefore, it seems that in most cases, the weight of the family, school and social environment has a reduced influence upon changing children's IQ.

### 8.7.2 Environment

It is simply not possible in the light of current knowledge, to determine precisely what percentage of IQ is attributable to genes and what percentage is the product of environment. A survey of several hundreds of professionals with expertise in the field of intelligence revealed that the experts believe the hereditary of intelligence is 75% and 25% for environment.

Human intelligence is influenced by various variables (age, occupation, experience, culture, profession) and is of different types. Being thus circumscribed, intelligence has the merit of determining various levels of performance and success in life. On the basis of intercultural and statistical comparisons there have been identified data according to which certain social activities which make the best use of certain intellectual skills can influence abstract thinking. The results of certain applicative studies show that improved and varied training—educational programs influence the development of intellectual skills, the abstract capacity of approaching and solving socio-cultural problems (Dumitriu (2010).



### Application activity 8.7

1. Compare and contrast nature and nurture as determinants of intelligence.
2. Using examples from our society, explain how the environment determine and influence intelligence.

## 8.8. Measuring intelligence



### Learning Activity 8.8

Do you think can intelligence be measured? If yes, what necessary elements to be used?

Over a period of years, procedures of measuring intelligence have evolved considerably, so that today there are a number of highly regarded devices for measuring intelligence.

### 8.8.1 Binet and intelligence testing

The modern intelligence testing movement was launched by Alfred Binet and his associates, who created a test to measure French school children's intelligence skills. Binet and his associates reasoned that virtually, all children follow essentially the same course of intellectual development but that some progress more rapidly than others. Thus, children of subnormal intelligence were presumed to be "retarded" in their development. Taking this reasoning further, Binet theorized that a child of low intelligence should perform on tests of intellect like a normal child of younger age—and conversely, that a precocious child should perform like an older child of average intelligence.

Binet invented the term “mental level” to express a child’s composite test score. This term later referred to as “Mental Age”, corresponds to the Chronological Age of children – who, on the average, receive a similar test score. Thus, a 6-year-old who scored as well as an average 8-year-old would be said to have a mental age of 8.

Guided by this theoretical perspective, Binet and his associates developed a series of subtests covering a range of reasoning and problem-solving abilities. The end result was a fairly elaborate test that first appeared in 1905. (This is called Simon-Binet Test).

Instead of giving a person’s performance on the Stanford-Binet as a mental age, Terman converted performance into a single score, which he called Intelligence Quotient or IQ. A quotient is the number that results from dividing one number by another. The idea of an intelligence quotient was first suggested by a German psychologist, William Stern in 1912. To compute IQ, Stern divided Mental Age by actual Chronological Age of the person taking the test and then multiplied by 100 to get rid of decimal point.

$$IQ = \frac{MA}{CA} \times 100 \quad IQ$$

For example, if a 6 year old child scored a mental age of 9, she would be assigned an IQ of 150

$$IQ = \frac{9}{6} \times 100 = 150$$

$$IQ = 150$$

Mental age must be calculated in months. According to Terman-Binet, there are 6 questions for each year, and each question corresponds with 2 months (12 months: 6=2).

This is an example of how to calculate mental age: an eight-year-old child has been tested in on Terman-Binet test. He succeeded all questions for seven years, two questions for 8 years and one question for nine years old. You can find his/her mental as follow:

- First of all, he/she will be given 7 years because he/she succeeded all questions for 7 years old.
- Secondary, 4 months for 2 questions succeeded for 8 years.
- Lastly, 2 months for one question on 9 years.

The mental age of that student is seven years + 4 months + 2 months = 7 and 6 months.

Conclusion: She/ he is 6 months late compared with his chronological age.

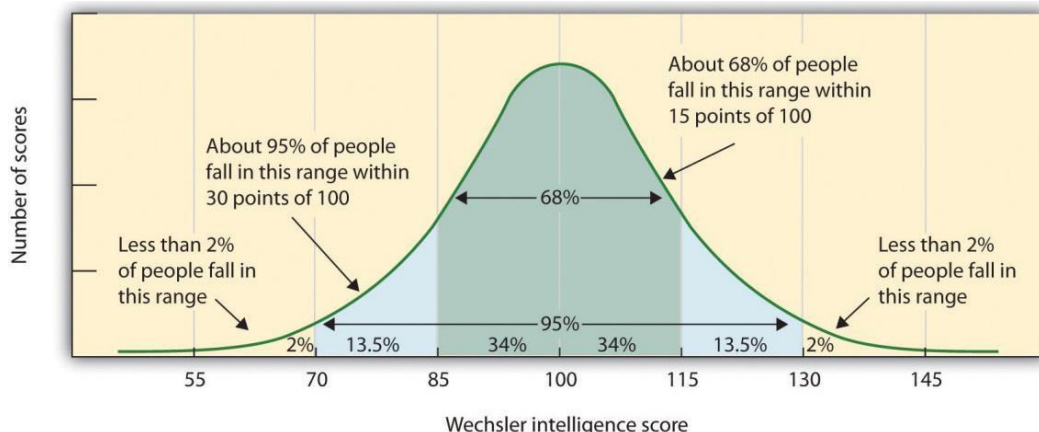


Figure 17: Weschler intelligence score

### 8.8.2 Factors that affect I.Q scores

- Developmental factors: I.Q scores tend to be more stable as children get older. Developmental problems that affect physical health and well-being may sometimes result in retardation or in deficits in brain processes. Such conditions will also have effects on children's ability to perform on certain tasks of intelligence tests.
- Emotional factors: under this we include psychological stress, adjustment problems and motivation. Children who undergo a great deal of stress tend to do poorly in school. Children who have experienced large numbers of stressors showed a decline in overall I.Q. Also, too much anxiety may cause problems, covering the child's ability to attend or concentrate and lowering his or her I.Q.
- Family and cultural factors: the family affects the child's motivation for schoolwork. If the parents, for example, are indifferent about their child's grades ignoring school reports, the child will sense that to them, school is not very important. In that case, a child may not try very hard to do well in school. Some factors that researchers think affect intelligence test scores include family size and structure and the values that the parents impart to their children. Also, family socio-economic status (SES), as measured by family income, parents' education, and the mother's working status all were linked to lowered test performance on selected Wechsler subtests. Cultural factors affect test performance in that early economic and socio-cultural deprivation experienced by disadvantaged minorities or majorities resulted in initial educational and intellectual deficits. As a result, young people from poor or disadvantaged families do poorly when they are given standardized tests.

### 8.8.3 Levels of IQ values

Lewis Terman (1916) developed the original notion of IQ and proposed this scale for classifying IQ scores:

- Over 140 - Genius or near genius
- 120 - 140 - Very superior intelligent
- 110 - 119 - Superior intelligence
- 90 - 109 - Normal or average intelligence
- 80 - 89 - Dullness
- 70 - 79 - Borderline deficiency
- Under 70 – Below average
- 50-70 - Mild intellectual disability
- 35-50 - Moderate intellectual disability
- 20-35 - Severe intellectual disability
- IQ < 20 - Profound intellectual disability



#### Application activity 8.8

Describe the factors that affect I.Q scores.

## 8.9. Intellectual disabilities



### Learning Activity 8.9

Jane takes longer to learn to talk than other children of the same age. What should be the problem she has?

### 8.9.1 Definition

The term intellectual disability refers to the level of cognitive functioning that is demonstrated by particular children. It is the circumstance in which a children's cognitive functioning is impeded to the point of causing a significant disability in receiving information from his or her environment, then effectively processing, problem solving and adapting to this information.

Intellectual disability is abnormality that has enormous social effects; it not only affects the people who suffer from it but also the family and society as a group. Intellectual disabilities are diminished cognitive ability that translates into a difference in the rate and efficiency with which the person acquires, remembers and uses new knowledge compared to the general population.

The term intellectual disability can be used to refer to-a significantly reduced ability to understand new or complex information, to learn new skills (impaired intelligence), with; A reduced ability to cope independently (impaired social functioning); which started before adulthood with a lasting effect on development.

American Association on Intellectual and Developmental Disabilities (AAIDD, 2010) defined Intellectual disability as “Significantly sub average general intellectual functioning existing concurrently with deficit in adaptive behaviour and manifested during the developmental period that adversely affects a child’s educational performance.”

An individual is considered to have an intellectual disability based on the following criteria:

- Sub average intellectual functioning: It refers to general mental capacity, such as learning, reasoning, problem solving, and so on.
- Significant limitations exist in two or more adaptive skill areas: It is the collection of conceptual, social, and practical skills that are learned and performed by people in their everyday lives.

### 8.9.2 Causes of Intellectual Disability

Approximately 70% of individuals with severe intellectual disability and 50% of individuals with mild intellectual disability have an organic or biological basis for their disorder. Some children’s cognitive deficits may simply reflect the lower end of the normal IQ distribution. In such cases, functioning represents an interaction of both genetic and environmental factors. Factors such as poverty, neglect, abuse, limited stimulation and poor parent-child interactions are but a few of the psychosocial factors that have been found to be related to intellectual functioning.

#### a. Biological causes of intellectual disability

*Table 14: Biological causes of intellectual disability*

Types	Example	Characteristics and considerations
Chromosomal abnormality	Down syndrome	<ul style="list-style-type: none"> <li>- Most common chromosomal abnormality</li> <li>- Distinctive physical characteristics</li> <li>- Generally mild to moderate intellectual disability</li> </ul>
	Fragile X syndrome	<ul style="list-style-type: none"> <li>- One of the leading inherited causes of intellectual disability</li> <li>- Predominantly affects males</li> <li>- Distinctive physical features</li> <li>- Wide variation in learning characteristics</li> </ul>

Metabolic disorders	Phenylketonuria (PKU)	<ul style="list-style-type: none"> <li>- Inborn error of metabolism, a recessive trait</li> <li>- Dietary intervention initiated shortly after birth prevents occurrence of intellectual disability</li> </ul>
Maternal infections	Rubella (German measles)	<ul style="list-style-type: none"> <li>- One of the leading causes of multiple impairments in children</li> <li>- Exposure during first trimester of pregnancy usually results in severe consequences</li> </ul>
Environmental Conditions	Fetal alcohol syndrome	<ul style="list-style-type: none"> <li>- One of the leading causes of intellectual disability</li> <li>- Mild to moderate intellectual disability with concomitant physical, deformities</li> </ul>
Gestational disorders	Low birth weight/ prematurity	<ul style="list-style-type: none"> <li>- Infant at risk for serious problems at birth</li> <li>- Potential for learning problems as well as sensory and/or major impairments</li> <li>- More common in mothers living in poverty, teenage pregnancy and women engaged in substance abuse</li> </ul>
Neonatal complications	<ul style="list-style-type: none"> <li>-Anoxia (oxygen deprivation)</li> <li>-Breach presentation</li> <li>-Prolonged delivery</li> </ul>	<ul style="list-style-type: none"> <li>- Complicating factors surrounding birth may cause intellectual disability and other developmental delays</li> </ul>
Infectious and intoxications	Meningitis	<ul style="list-style-type: none"> <li>- Viral infection causing damage to the covering of the brain-the meninges</li> <li>- May result from typical childhood illness such as chicken pox or mumps</li> <li>- Intellectual disability is a distinct possibility</li> </ul>
	Lead poisoning	<ul style="list-style-type: none"> <li>- Highly toxic substance</li> <li>- Infants/toddlers living in older homes in impoverished areas at risk for ingesting lead-based paint chips</li> <li>- Potential for causing seizures, central nervous system damage and brain damage</li> </ul>
Environmental factors	Mulnutrition Environmental deprivation child abuse / neglect	<ul style="list-style-type: none"> <li>- Correlates, but not necessarily causes, of intellectual disability, especially instances of mild intellectual disability</li> <li>- Best viewed as interacting psychosocial risk factors which heighten the vulnerability of some children for learning difficulties</li> </ul>

## b. Causal factors Intellectual Disability

Causal factors, including genetic predisposition, environmental insults, developmental vulnerability, heredity and environment.

**They are classified on four categories:**

- **Biomedical:** factors that relate to biological processes, such as genetic disorders or nutrition.
- **Social:** factors that relate to social and family interaction, such as stimulation and adult responsiveness.
- **Behavioral:** factors that relate to potentially causal behaviors, such as dangerous (injurious) activities or maternal substance abuse.
- **Educational:** factors that relate to the availability of educational supports that promotes mental development and the development of adaptive skills.

### 8.9.3 Classification of Intellectual Disability

Intellectual disability divided severity of disability into four categories (mild, moderate, severe and profound intellectual disability).

*Table 15: Classification of intellectual disability*

Level of Intellectual Disability	IQ range	Approximate mental age in adulthood	% of persons with Intellectual Disability at this level
Mild	55-68	8 years, 3 months to 10 years, 9 months	85
Moderate	36-51	5 years, 7 months to 8 years, 2 months	10
Severe	20-35	3 years, 2 months to 5 years, 6 months	3.5
Profound	< 20	< 3 years, 2 months	1.5

### 8.9.4 Characteristics of people Intellectual Disability

Characteristics of people with intellectual disabilities that can affect their academic learning, as well as their ability to adapt to home, school, and community environments are presented under the following points:

- **General Cognition:** People with intellectual disabilities vary physically and emotionally, as well as by personality, disposition, and beliefs. Their apparent slowness in learning may be related to the delayed rate of intellectual development.

- **Learning and Memory:** The learning and memory capabilities of people with intellectual disabilities are significantly below average in comparison to peers without disabilities. People with intellectual disabilities develop learning sets at a slower pace than peers without disabilities, and they are deficient in relating information to new situations.

Children with intellectual disabilities may not spontaneously use appropriate learning or memory retention strategies and may have difficulty in realizing the conditions or actions that aid learning and memory.

- **Attention:** To acquire information, children must attend to the learning task for the required length of time and control distractions. Children with intellectual disabilities may have difficulty distinguishing and attending to relevant questions in both learning and social situations.
- **Adaptive Skills:** A child with intellectual disabilities may have difficulty in both learning and applying skills for a number of reasons, including a higher level of distractibility, inattentiveness, failure to read social cues, and impulsive behavior.
- **Self-Regulation:** The ability to rehearse a task is related to a broad concept known as self-regulation, or the ability to mediate or regulate one's own behavior. Information-processing theorists study how a person processes information from sensory stimuli to motoric output. In information-processing theory, the learning differences in people with intellectual disabilities are seen as the underdevelopment of metacognitive processes. The lack or underdevelopment of these skills notably affects memory, rehearsal skills, organizational ability, and being in control of the process of learning.
- **Speech and Language:** People with intellectual disabilities may have delayed speech, language comprehension and formulation difficulties. Language problems are generally associated with delays in language development rather than with a bizarre use of language.
- **Motivation:** People with intellectual disabilities are often described as lacking motivation, or outer-directed behavior. Past experiences of failure and the anxiety generated by those failures may make them appear to be fewer goals directed and lacking in motivation. The result of failure is often learned helplessness.
- **Academic Achievement:** The cognitive inefficiencies of children with mild to moderate intellectual disabilities lead to persistent problems in academic achievement. Children with intellectual disabilities may be able to learn basic computations, but may be unable to apply concepts appropriately in a problem-solving situation.

- **Physical characteristics:** Children with intellectual disabilities with differing biological aetiologies, may exhibit coexisting problems, such as physical, motor, orthopaedic, visual and auditory impairments, and health problems.

The majority of children with severe and profound intellectual disabilities have multiple disabilities that affect nearly every aspect of intellectual and physical development.



### Application activity 8.9

1. Determine factors of intellectual disability.
2. Outline the characteristics of people with disabilities connected to language.

## 8.10. End unit assessment




### End unit assessment

1. After understanding what is intelligence and relative knowledge, what do you think could be the role of intelligence on our real life?
2. Analyze the definition of intelligence and find out its three components seen through ability
3. Classify, Intellectual disabilities according to their severity.

# Unit 9

## MOTIVES OF LEARNING

 **Key unit competence:** Justify how motives of learning contribute to acquisition of behavior.



### Introductory activity

Use internet and other books from the library and analyze different types of motives that promote the acquisition of behavior.

For any learning to take place, there are different factors (internal or external, social or personal) that inspire one to acquire a certain behaviour and attitude. Those factors are technically called motives. This unit describes physiological, social and personal motives of learning. It also analyzes the acquisition of new behaviour and attitudes as well as reasons why peoples' behaviour patterns and attitudes change in time and in space.

### 9.1. Key motives to learning (Physiological Motives)

#### Learning Activity 9.1



Using internet and other books from the library, explain and find examples of physiological motives of learning

#### 9.1.1 Definitions of terms

##### Motives:

- Motives are the results from drives in which are closely related to needs, reasons or things that prompt certain behavior.
- A motive is something such need or desire that causes a person to act. It is also a specific physiological or psychological taste of arousal that directs an organism's energy toward a goal.
- Motive can also be defined as a reason offered as an explanation for or cause of an individual behavior.

- Motive can be understood as a reason for doing something.

**Needs:** These are internal imbalances that occur when we are deprived of something. For example, lack of food, water, which cause problem in the body.

**Drives:** Are internal energies that create condition which pushes an organism to direct its behaviour usually toward a goal.

### 9.1.2 Physiological/biological/primary motives

Physiological/biological motives are basic needs that are essential for survival of the organism. They are basic, inborn and biological drives that are present in all beings. They are called primary needs because they are vital for life and are necessary for survival. These motives are deeply rooted in biological processes and functioning. Such motives are triggered when there is imbalance in the body. Primary motives are aimed at satisfying survival needs. Once these physiological needs are not met, an organism dies, hence, cannot even acquire any behavior.

### 9.1.3 Types/examples of physiological motives

- **Hunger motive:** People eat to live. The food they take is digested and nutritional substances are absorbed by the body from which it gets energy in order to sustain life. When these substances are exhausted, some imbalance exists and hinders learning.
- **Thirst motive:** In our daily life, regularly we take fluids in the form of water. These fluids are essential for our body tissues for normal functioning. When the water level in the body decreases, we develop motive to drink water.
- **Need for oxygen and respiration:** Our body always needs oxygen, and we get it through continuous respiration. Oxygen is necessary for the purification of blood. Without regular supply of oxygen, we cannot survive. Lack of oxygen leads to damage of brain and death.
- **Motive for regulation of body temperature:** Maintenance of normal body temperature is necessary. Rise or fall in the body temperature causes many problems in the body.
- **Need for sleep:** Sleep is an essential process for normal functioning of the body and mind. When our body and mind are tired, they need rest to restore energy.
- **Shelter and clothing:** These protect a person from coldness.
- **Need for avoidance of pain:** We cannot continue to bear pain. Whenever we experience pain, we try to avoid it. One cannot learn well when he/she is in painful situation/environment.

- **Drive for elimination of waste:** Our body cannot bear anything excess or anything waste. Excess water is sent out in the form of urine or sweat while digested food after absorption of nutritional substances are sent out in the form of stools. Once these wastes are eliminated, we feel comfortable and can learn certain behavior.

Note that the physiological/biological motives thus have their origin in the physiological state of the body. These motives are triggered by departures from the balanced physiological conditions of the body, as well as by sensory stimuli. This balance is crucial for life.



### Application activity 9.1

As a good citizen of Rwanda, assess different programmes that the Government has put in place in the line with meeting students' physiological needs for facilitate their learning.

## 9.2. Key motives to Learning (Social Motives)



### Learning Activity 9.2

Using internet and other books from the library, with well examples, find and describe social motives of learning.

### 9.2.1 Social motives (definition)

While physiological motives pertain to both animals and human beings, social motives are specific only to human beings. They are called social motives because they are learned in social groups as results of interaction with the family and society. That is why their strength differs from one individual to another.

### 9.2.2 Examples of social motives and their description

**a) Achievement motive:** It refers to a desire to achieve some goal. This motive is developed in the individual who has seen some people in the society attaining high success, reaching high positions and standards. He/she develops a concern to do better, to improve performance. Researchers found that high achievers choose and perform better at challenging tasks, prefer personal responsibility, seek and utilize feedback about the performance standard, having innovative ideas to improve perform while low achievers do not accept challenges, put on average standards and accept failure easily.

To help children achieve higher, parents must try to inculcate leadership qualities in their children for better achievement in their future life. They must allow children to take decision independently and guide them for higher achievement from the childhood, so that the children develop high achievement motivation.

**b) Aggressive motive:** It is a motive to react aggressively when faced frustrations. Frustration may occur when a person is obstructed from reaching a goal or when he/she is insulted by others. Even in a fearful and dangerous situation the individual may resort aggressive behavior. Individual expresses such behaviour to overcome opposition forcefully which may be physical or verbal aggression.

**c) Power motive:** People with power motive will be concerned with having an impact on others. They try to influence people by their reputation. They accept who obey their instructions. People with high power motive choose jobs where they can exert their power. They want people as followers. They expect high prestige and recognition from others. E.g., A person may aspire to go for jobs like police officer, politician etc.

**d) Acquisitive motive:** This motive directs the individual for the acquisition of material property. This motive arises as we come across different people who have earned a lot of money and leading a good life. It is a human tendency to acquire all those things which appear attractive to him/her.

**e) Curiosity motive:** this is also called stimulus and exploration motive. Curiosity is a tendency to explore and know new things. We see people engaged in travelling to look at new places, new things and new developments taking place outside their environment. These people want to extend their knowledge and experiences by exploring new things. Curiosity motive is very helpful during childhood. This motive facilitates children learn faster.

**f) Gregariousness/affiliation need:** This is a tendency to associate oneself with other members of the group or same species. The individual will be interested in establishing, maintaining and repairing friendly relationships and will be interested in participating in group activities. Individual will conform to social norms, mores and other ethical codes of the groups in which she/he is interested. To the greater extent gregariousness is developed because many of the needs like basic needs, safety and security needs are fulfilled.

Apart from the above-described motives, need for self-esteem, social approval, self-actualization, autonomy and master move are to be included in social motives of learning.



## Application activity 9.2

Explain how social motives can be promoted in schools to facilitate learning.

### 9.3. Key motive to Learning (Personal Motives)



#### Learning Activity 9.3

Using internet and other books from the library, explain and find examples of personal motives of learning

#### 9.3.1 Personal motives (definition)

In addition, the physiological and social motives, there are some other motives which are allied with both said above. These are highly personalized and very much individualized motives.

#### 9.3.2 Examples of personal motives

**a) Force of habits:** We see different people having formed different habits like chewing tobacco, smoking, alcohol consumption etc. There may be good habits also like regular exercising, reading newspapers, prayers, meditations, etc. Once these habits are formed, they act as drivers and compel the person to perform the act. The specialty of habits is that; they motivate the individual to engage in that act automatically.

**b) Goals of life:** Every normal person will have some goals in the life. They may be related to education, occupation, income, sports, acquisition of property, public service, social service, etc. Once a goal is set, he/she will be motivated to fulfil that goal. The goals people set, depend upon various factors like knowledge, information, guidance, support, personality, facilities available, aspirations, family and social background, etc.

**c) Levels of aspirations:** Aspiration is aspiring to achieve or to get something or goal. But such achievement depends upon the level of motivation the individual has. Every individual will have a goal in his/her life and strives to reach that goal. But the effort to attain that goal varies from one individual to another. The amount of satisfaction he/she gains depends upon his/her level of aspiration.

Eg. If a student is expecting 80% of marks in examination, gets only 75%, he/she may be unhappy. On the other hand, a student expecting failure may feel very happy if he/she gets just 35% passing marks, because the student with high level of aspiration works hard, whereas the student with level may not.

Note that always higher level of aspiration is advisable. However, it should correspond with his/her abilities also. Because if an individual aspires for higher level achievement without possessing required ability, he/she will have to face frustration and disappointment.

**d) Attitudes:** Our attitudes determine our motivation to learning. Attitudes are specific to individual. For example, a person within the family, may have positive attitude toward family planning and all others having negative attitudes. Furthermore, Attitudes represent collection of personal beliefs, feelings and values that influence a person's behaviour in response to specific ideas, objects, persons or situations. Attitudes represent habits of thought formed over time through exposure to people, events and ideas over the course of one's life experiences. This storehouse of acquired attitudes acts like a subconscious computer master program for controlling behavior. These habits of thought have an impact not only on how we see and react to the world around us, but also on how we see ourselves. Attitudes are often based not on reality but rather, simply on how we personally think or feel about something. This then, becomes our reality. Because our attitudes reflect what we think, feel and believe about ourselves and the world around us, they effectively shape our expectations of daily life, and these expectations directly influence the nature of our behavior.

**e) Interests:** Like attitudes, interests also determine people's motivation. And they differ from one person to another. For example, interest in sports, T.V etc, wherever we have positive attitudes, we will have motivation to attain. In negative attitude, we will be motivated to avoid. If a person is interested in music, he/she will be motivated to learn it. In this way, our personal motives determine our behavior.

**f) Initiative:** This the tendency to act, take charge, or move forward before others do.

**g) Drive to achieve:** The desire to accomplish something versus working for external rewards like money or prestige.



### Application activity 9.3

Suppose you are a teacher in one of the schools of Rwanda, what will you do so as to promote personal motives of students in learning?

## 9.4. Acquisition of new behaviours and attitudes



### Learning Activity 9.3

Using internet and other books from the library, find the ways through which new behaviours and attitudes are acquired.

### 9.4.1 Attitude

An attitude refers to an expression of the way one feels. It is a general and lasting positive or negative opinion or feeling about some person, object, or issue. It is also a learned tendency to evaluate things in certain way.

#### 1. Ways by which new attitudes are acquired/formed/founded

**a) Direct personal experience:** A person's direct experience with the object determines his/her attitude towards it. The personal experience of an individual, whether favourable or unfavourable, will affect his/her attitude deeply but these attitudes are difficult to change. For example, an individual joins a new job, which is recommended to him/her by his/her friend.

But when he/she the job, she/he finds the work repetitive, supervisor too tough and co-workers not so cooperative, she/he would develop a negative attitude towards the job, because the quality of his/her direct experience with the job is negative.

**b) Association:** Sometimes an individual comes across a new object which may be associated with old attitude object. In such case, the attitude towards the old attitude object may be transferred towards the new attitude object. For example, if a new worker remains most of the time in the company of a worker who is in the books of the supervisor, and towards whom supervisor has a positive attitude, the supervisor is likely to develop a favourable attitude towards the new worker also. Hence, the positive attitude for the old worker has been transferred towards the new worker because of the association between the old and the new worker.

**c) Family and peer groups:** Attitudes like values are acquired from parents, teachers and peer group members. In our early years, we begin modelling our attitudes after those we admire, respect or may be even fear. We observe the way our family and friends behave, and we shape our attitudes and behaviour to align with theirs. We do so even without being told to do so and even without having direct experience.

**d) Neighbourhood:** The neighbourhood in which we live has certain cultural facilities, religious groupings and ethnic differences. Further, it has people, who are neighbours with different backgrounds. The people belonging to different cultures have different attitudes and behaviors. Some of these we accept and some of these we deny and possibly rebel. The conformity or rebellion in some respects is the evidence of the attitudes we hold.

**e) Economic status and occupations:** The economic status and occupational position of the individual also affect his attitude formation. Our socio-economic background influences our present and future attitudes. Research findings have shown that unemployment disturbs former religious and economic values. Children of professional class tend to be conservatives. Respect for the laws of the country is associated with increased years of higher education.

**f) Mass communications:** Attitudes are generally less stable as compared to values. Advertising messages for example, attempt to alter the attitude of the people toward a certain product or service.

Attitudes can be learned in a variety of ways. Consider how advertisers use classical conditioning to influence your attitude toward a particular product. In a television commercial, you see young, beautiful people having fun on a tropical beach while enjoying a sports drink.

**g) Operant conditioning:** Operant conditioning can also be used to influence how attitudes develop. Imagine a young man who has just started smoking. Whenever he lights up a cigarette, people complain, chastise him and ask him to leave their vicinity. This negative feedback from those around him eventually causes him to develop an unfavourable opinion of smoking and he decides to give up the habit.

**h) Observation:** Finally, people also learn attitudes by observing the people around them. When someone you admire greatly espouses a particular attitude, you are more likely to develop the same beliefs. For example, children spend a great deal of time observing the attitudes of their parents and usually begin to demonstrate similar outlooks.

## 2. Attitude change

While attitudes can have a powerful effect on behavior, they are not set in stone. The same influences that lead to attitude formation can also create attitude change.

Classical conditioning, operant conditioning, and observational learning can be used to bring about attitude change. Classical conditioning can be used to create positive emotional reactions to an object, person, or event by associating positive feelings with the target object. Operant conditioning can be used to strengthen desirable attitudes and weaken undesirable ones. People can also change their attitudes after observing the behaviour of others.

Messages that are thought-provoking and that appeal to logic are more likely to lead to permanent changes in attitudes. People can also change their attitudes when they have conflicting beliefs about a topic. In order to reduce the tension created by these incompatible beliefs, people often shift their attitudes.

## 3. Foundations/components of attitudes

**a) Affect or emotion/emotional foundations of attitudes:** A key part of attitude is the affect or emotion associated with attitude. At a very basic level, we know whether we like or dislike something or find an idea pleasant or unpleasant.

For instance, we may say that we know something in our heart or have gut feeling. In such cases our attitudes have been formed through our emotions rather than through logic or thinking. This can happen through sensory reactions, values, operant/instrumental conditioning, classical conditioning, mere exposure, semantic generalization and evaluative conditioning.

### b) Cognition/cognitive foundations of attitudes

What might be called beliefs, comes direct experience with the world or through thinking about the world. Thinking about the world includes any kind of active information processing such as deliberating, wondering, imagining and reflecting, as well as through activities such as reading, writing, listening and talking. For instance, if you believe that insects are dirty, then you will probably have the attitude that insects are not food. If you read that locusts and other insects are happily eaten in some cultures, then you may come to believe that locusts may not be so bad. Your attitude here comes from thinking about new facts you read.

### c) Behavior/Behavioral foundations of attitudes

Sometimes we form attitudes from our actions. This can happen if we do something before we have an attitude. **Example (1)**, going to an art opening of an unknown artist. When we are unsure of our attitudes.

**Example (2)**, going with friend to a political rally, or when we are not thinking about what we are doing (mindlessly singing along with random station on the radio). That is there are times when joking through the emotions can cause us to form an attitude consistent with those actions. In the previous examples, people may come to hate the new artist, support free trade, or like classical music because their actions have led them to engage in these behaviors, which then led to formation of an attitude. Hence, we look to our behaviour and figure out our attitude based on what we have done or are doing. We strive for consistency between our attitudes and our actions and when the two do not match, we may form a new attitude to coincide with our past actions.

In addition, evidence suggests that attitudes may develop out of psychological needs (motivational foundations), social interactions (social foundations) and genetics (biological foundations).

### 9.4.2 Definition of behaviour

Behaviour is the way that someone acts. Although the two are related, they are distinct from one another as attitude focuses on how one feels, and behaviour deals with one's actions. However, one's attitude is often expressed through his/her behavior.

#### Techniques of learning new behavior

Generally, it's important to choose a good, comfortable learning environment and set it up so that it's easy for the animal to learn the intended response. Minimize distractions. Make sure there are no harming things around.

**a) Practice Makes Perfect / Overlearning:** A technique can be pointed out at this point, which is that practice makes perfect. Any new behaviour you try to learn (or unlearn) will initially be difficult to accomplish. Your body and mind are not used to doing things in the new way and will require repeated practice of these new ways of doing things before they become second nature. With practice, what is initially effortful becomes effortless. The process of practicing over and over makes the new behaviour more familiar and ultimately something that can be just performed without thought or effort. Repeated practice trains the child's brain to be able to perform the behaviour unconsciously.

**b) Shaping:** New behaviors you want to learn are likely complex in nature, requiring effort and practice to achieve. It is not possible to learn complex behaviors all at once. Instead, you must use the principles of successive approximation and overlearning in order to gradually master your goal.

**c) Chaining:** Shaping is the technique of choice when you are attempting to learn a single isolated behavior. A complementary technique, chaining, is useful for situations when you are interested in learning a complex sequence of behaviors. Chaining and shaping approaches may be used concurrently when you are faced with learning a complex behaviour that can be broken into a series of smaller sub-behaviors.

**d) Observation:** New behaviors are acquired by observing events and by watching other people and through language, we learn things we have neither experienced nor observed. They also learned by association when our minds connect events that occur in sequence, through reinforcement (reward and punishment), and can be acquired by imitating the behaviors of others.

### 9.4.3 Strategies that promote positive attitudes and positive behaviors in children

Positive Attitude and behaviour can be encouraged in the classroom through the following:

- **Be Consistent with Rules:** Establish the rules from the first lesson. It can be helpful to let the students write some of their own class rules then students then use peer pressure to keep them. A rule a student has made is far more likely to be kept than one a teacher introduces. Once the rules are established then follow them consistently with all students
- **Get the Students Full Attention Before Telling Them Anything:** If students are not focused on you, they will not be listening, so take time of gaining their attention. Better to repeat to instructions to every student again. Make sure you are together before telling them anything.
- **Use Positive Language and Body Language:** Positive language will encourage students to use their own positive language. Eg: don't say "stop writing" but say "can you all listen please?". Positive body language is just as important. If you have had a bad morning and walk into a classroom in a bad mood, students will pick it up. Try to hide that behavior, smile as often as you can. Create a warm welcoming environment to students when they enter your class.
- **Mutual Respect:** If you want to be shown respect you have to role model the behaviour to your students. Listen to students' opinions.
- **Have quality lessons:** Avoid and boring lessons. Design lessons that are fast paced, activities should be scattered throughout. Don't expect students to be sat there for 45 minutes listening to you speak. Allow the students to research and discover knowledge themselves. The more they are engaged the less their mind will look for trouble.

- **Know the Students:** Teacher should take time to get to know his/her students them, their likes and dislikes. If she/he can plan a lesson on what the student is interested in, she/he will find them easier to engage. Knowing student also helps if they are going through personal issues.
- **Be able to diagnose learning problems:** Have a basic knowledge of learning problems and the signs of these. Teachers are in the privileged position of being able to diagnose learning problems and from here the teacher can help provide tools for the student to succeed.
- **Routines:** Like rules, a routine is important to start from the beginning. Establish a routine that works for you and your students. This could be as simple as one student gives out the books, another gives out the pens. Giving a disruptive student responsibility can minimise their behaviour.



#### Application activity 9.4

After describing the ways by which attitudes and behaviors are acquired, establish a clear relationship between attitudes and behaviors.

## 9.5. Reasons why peoples' behaviour patterns and attitude change in time and in space



### Learning Activity 9.5

Using internet and other books from the library, find reasons why people's behaviour patterns and attitude change in time and in space.

### 9.5.1 Behaviour patterns

Behaviour patterns describe interactions between objects and focus on how objects communicate with each other. Behaviors patterns are recurrent ways of acting by an individual or group toward a given object or in a given situation or a recurrence of two or more responses that occur in a prescribed arrangement or order. It is also a set of dominant behaviors and emotional reactions that include a high emphasis of competition, impatience, hostility and aggression.

## 9.5.2 How to change behaviour patterns?

Behaviour patterns usually give stability and efficiency to our lives. Some examples of behaviour patterns are performing tasks in a particular way, collaborating on an assignment, working in concert in the laboratory, planning experiments with the team, collaborative decision-making and managing conflict.

Note that many behaviour patterns develop through reward and punishment and are called learned behaviour patterns (chain of behaviour which are multifariously linked from simpler, smaller segment. Behaviour patterns (outside of simple instinct) come from three general areas: (1) Person's particular strengths and weaknesses, (2) learned reactions from experiences and (3) habits.

Behaviors begin mentally, therefore training the body, mind and emotions to what is wanted is mental exercise. We often think of behaviour in terms of activities procrastinating or overworking. When you consider how you behave, you discover that your thoughts, emotions and beliefs are true roots of these behaviors. Because all these behaviors are yours alone, you have the right and the power to change them. Some behaviour patterns that team members may want to change are procrastination, over analysing a problem, being late to meetings or poor time management.

We may be frustrated by the typical ways we deal with situations and treat other people. We may react all too often with frustration towards others, or be controlling, timid, or waiting to speak up but not having self-confidence to act. Changing these types of behaviour patterns can increase confidence in a person's abilities and self-esteem.

## 9.5.3 Reasons why people's behaviour patterns and attitudes change in time and space

- Attitudes and behaviors are not set in stone and may change overtime. Some reasons behind this change are tackled here below.
- Behaviour patterns and attitudes may change when people learn new information.
- When they are persuaded by influential people.
- When individuals experience feelings of uneasiness or guilt due to cognitive dissonance.
- Human have evolved as social, empathetic, collaborating and altruistic beings in small groups sharing common identities at the same time a fear of stranger has been built into our system, which influences the way we perceive events and people, including how we react to influxes of newcomers in our community.

### **9.5.4 Reasons why people need to change attitudes**

- People with a positive attitude tend to enjoy life more and are generally happier.
- Negative attitudes affect others. No one wants to be around a negative person. Negative attitudes can ruin relationships.
- Negative attitudes produce negative circumstances. If we think negatively about a situation or a person, eventually we will give power to those thoughts.
- Maintaining negative attitudes will drain you of physical energy. Becoming angry, upset or frustrated can release negative emotions that can cause tiredness and a weak immune system. Chronic stress from negative attitudes disrupts the body's hormone balance and depletes the brain chemicals responsible for feel-good emotions.
- A positive attitude helps you to be an overcomer when the adversities of life come.
- A person with negative attitudes blames others for their difficulties.
- A positive attitude will reduce negative emotions and help recover from negative experiences like trauma and loss very quickly.

### **9.5.5 What one can do to have a better attitude?**

- Focus on his/her strengths more than weaknesses.
- Monitor what he/she watches on TV, computer or what she/he reads.
- Stop negative thoughts immediately. Negative thoughts will come and in the beginning of change she/he may even have an increase in negative thoughts.

### **9.5.6 Importance of behaviour change**

- Behaviour change can improve our health. Making healthier choices such as eating nutritious foods, exercising regularly, and getting enough sleep can help us feel our best and enjoy a higher quality of life. Additionally, adapting these healthy habits can help prevent chronic diseases such as heart disease, stroke, cancer and diabetes.
- Behaviour change can improve our relationships. When we make an effort to change our behaviour for the better, we often find that our relationships with others improve as well. This is because our new behaviors may be more positive and constructive, and they may help to build trust and communication.
- Behaviour change can lead to success in our work and careers. When we make positive change in our behavior, we often find that we are more productive and successful in our jobs. These new behaviors may help us to advance in our career.

- Behaviour change can improve the world around us. When we make positive changes in our own behavior, we can set an example for other to follow. In addition, our new behaviors may help to make our communities and the world a better place.
- Behaviour change helps to save money and resources. When we make positive changes in our behavior, we often find that we save money and helps to protect environment. For example, if we choose to recycle instead of buying new products, we can save money and help to protect the environment. A lot of toxic habits cost money. This is either directly through purchases or indirectly by robbing you of the time, energy, and ability to engage in more fruitful activities.
- Behaviour change helps one adapt. When we make positive changes in our behavior, we often find that we are better able to adapt to new situations. New behaviors may help to overcome challenges and obstacles.
- Behaviour change will help others through your experience. Sharing your stories and journey to recovery will assist others who are already on the path, and even those that have not yet initiated change. It can also help prevent persons from starting the toxic habit in the first place.
- Behaviour change will make you enjoy life. In many instances, the behavioural change you will experience will add much more value to your lives by personal satisfaction and improved relationships with your families and loved ones.



### Application activity 9.5

Examine positive impact of behaviour and attitude change in everyday life.

## 9.6. End unit assessment




### End unit assessment

1. With three examples on each, differentiate biological drives from social drives of learning.
2. What will happen to children if their needs are not met?
3. Suppose you are head-teacher at a certain school in Rwanda, what can you do to meet students' needs so as to facilitate their learning?

# Unit 10

## THEORIES OF LEARNING

 **Key unit competence:** Provide opinions on views laying in theories of learning.



### Introductory activity

In year senior Four, you have learnt history of psychology and different schools of psychology, key concepts about psychology, theories, learning. Read information about different theorists who contributed ideas about learning, memory, behaviour and personality.

What impact do these theorists have had on learning as a permanent change of behavior?

Learning theories are conceptual frameworks that describe how knowledge is absorbed, processed, and retained during the learning process. Learning combines cognitive, emotional, and environmental influences and experiences in order to acquire, improve, or change one's knowledge, skills, and values.

Learning theory is divided into different categories such as behaviourism, cognitivism, constructivism, social constructivism and connectivism. Only the objectively observable aspects of learning are addressed by behaviourism.

To explain brain-based learning, cognitive theories look beyond behavior, and constructivism sees learning as a process in which the learner actively constructs or builds new ideas or concepts. Aside from the traditional theories of learning, many new theories have emerged as a result of societal change.

## 10.1. Key terms related to theories of learning

### Learning Activity 10.1



1. From the knowledge you have about terminologies related to history of psychology, schools of psychology, and their impact in behavioural change
2. Referring to your knowledge acquired in senior four, list the key words related to both schools of psychology and psychology. Define those terms and relate them to theories of learning.

**Theory:** One or more ideas that explain how or why something happens. The set of general principles that a particular subject is based on. Learning theories are conceptual frameworks that describe how knowledge is absorbed, processed, and retained during the learning process. Cognitive, emotional, and environmental influences, as well as prior experience, all influence how understanding is acquired or changed, and knowledge and skills are retained.

**Behaviourism:** The belief that human and animal behaviour can be explained using conditioning rather than thoughts or feelings, and that behavioural disorders are best treated by changing behaviour patterns.

**Constructivism:** The active processing of new information in the context of prior learning and the student's readiness to learn.

**Insight Learning:** A type of cognitive learning that involves the mental rearrangement or restructuring of the elements in a problem in order to achieve a sudden understanding of the problem and arrive at a solution. Insight learning was proposed as an alternative to trial-and-error learning by Wolfgang Köhler in the 1920s, based on his observations of apes stacking boxes or using sticks to retrieve food.

**Transfer:** Learning or transfer of knowledge or transfer refers to learning in one context and applying it to another.

**Self-regulation:** Ability to monitor and control our own behavior, emotions, or thoughts, altering them in accordance with the demands of the situation. It includes the abilities to inhibit first responses, to resist interference from irrelevant stimulation, and to persist on relevant tasks even when we don't enjoy them.

**Zone of Proximal Development:** Often abbreviated as ZPD, is the difference between what a learner can do without help and what he or she can do with help.

**Schema:** A mental framework humans use to represent and organize remembered information. They enable us to recall, modify our behavior, or try to predict most likely outcomes of events.



### Application activity 10.1

After reading introduction and concepts related to learning theories; Make a paragraph highlighting the importance of learning theories.

## 10.2. Insight learning theory



### Learning Activity 10.2

1. What do you do when you are stuck in problematic situation?
2. Read these statements and reflect on them:
  - a) You are showering or walking around the class, and you remember something that has escaped you during a test or exam.
  - b) Finding out the solution to a problem after you have already given up.
  - c) Imagining the best decision to make or solution to implement after a long period of time.

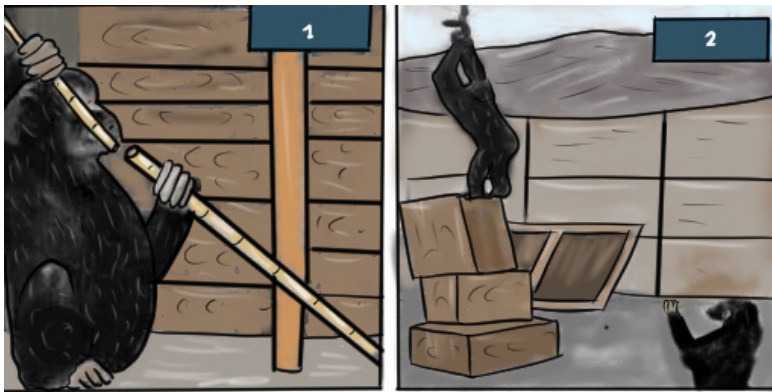
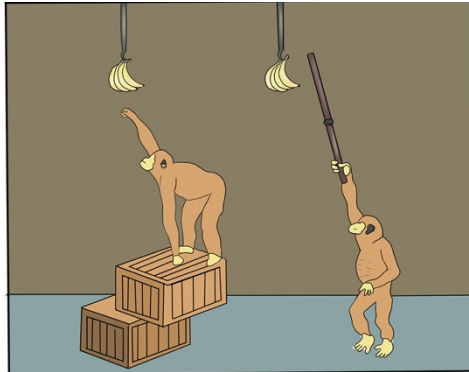
What could be this kind of learning theory and why?

### 10.2.1. Description of insight learning theory

This theory is also called Gestalt Theory of Learning. An explanation of Gestalt School of Psychology. The word Gestalt in German language means 'whole', 'total pattern' or 'configuration'. German psychologist Wolfgang Kohler was researching primate behaviour in the 1920s. He created a few straightforward tests that resulted in the creation of insight learning, one of the earliest cognitive theories of learning.

In this study, Kohler placed a piece of fruit just out of each chimpanzee's grasp. He then gave the chimpanzees three boxes or two sticks, and he waited and observed. Kohler observed that the chimpanzees paused, took a seat, and considered a solution after realizing they couldn't easily reach or jump up to grab the fruit. After a short while, the chimpanzees stood up and started to fix the issue.

In the first instance, the issue was resolved by combining the smaller sticks into the longer stick to make one incredibly long stick that could be used to knock the hanging fruit to the ground. In the second scenario, the chimpanzees would find a solution by piling the boxes on top of one another so they could climb to the top and obtain the fruit.



There are numerous ways that learning happens. Sometimes it comes from direct observation, and other times it comes through experience gained from close encounters with the environment. This recently discovered kind of learning is what Kohler dubbed insight learning. These discoveries led Kohler to develop his theory of insight learning, which served as an early justification for the involvement of cognition, or thinking, in the process of learning.

**The common features of the experiments on insightful learning are as follows:**

- The nature of the experimental situation is very important for insightful learning. The organism must be able to perceive the relationships among all relevant parts of the problem before insight can occur.
- The organism reacts to the whole situation, not to its component parts.
- The organism perceives the relationships between means and the goal and restructures the perceptual field.

- Insight follows a period of trial-and-error behavior. In the trial-and-error period, the organism does not, however/exhibit blind and random attacks as shown by Thorndike's cat. On the other hand, it tests behavioral hypotheses in the form of accepting some and discarding others.
- The insightful solution comes all on a sudden.
- Once the insightful solution is reached, the organism shows high degree of retention and transfer to similar problems.
- Insight is closely related to the organism's capacity to learn. The capacity for insightful learning depends on age, experience, and individual differences.

### 10.2.2. Characteristics of Insight Learning

The arrangement of the problem situation influences insight. The insight will come easily if the necessary materials and tools are perfectly arranged to perceive the relationship. In Kohler's experiment, for example, Sultan (Chimpanzee) was able to solve the problem because he could see the boxes or sticks nearby. In an attempt to find a solution, humans scan their surroundings and mentally manipulate and rearrange objects in a purposeful arrangement.

Once a problem has been solved with insight, it is simple to repeat and reuse the solution. For example, if Sultan used a stick to pull in the bunch of bananas, he will look for a stick the next time a similar problem arises. Once a solution is discovered through insight learning, it can be applied to new problems. When the same type of problem was encountered, Sultan, for example, did not show any trial-and-error attempts; instead, he joined the two sticks and approached the banana bunch once the cognitive relationship was established.

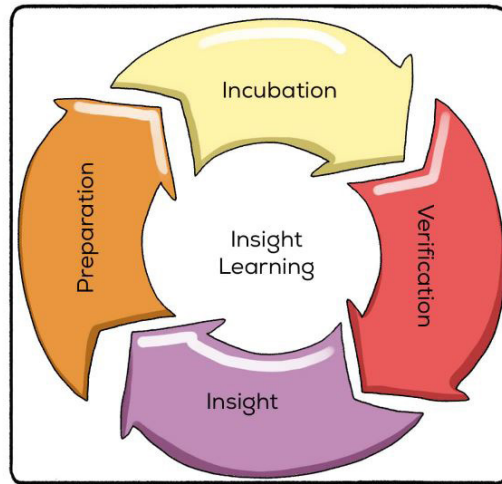
In insight learning, the entire situation appears to take on a new form, altering an individual's perception and giving circumstances a meaningful and appealing appearance.

### 10.2.3. Four Stages of Insight Learning

The four stages of insight learning are preparation, incubation, insight, and verification.

- **Preparation:** The process begins as a person tries to solve the problem. He/she has the materials and information in front of him/her and begin to make connections. Although that person sees the relationships between the materials, things just haven't "clicked" yet. This is the stage where a person starts to get frustrated.
- **Incubation:** During the incubation period, a person "gives up" for a short period of time. Although he/she has abandoned the project, the brain is still making connections on an unconscious level.

- **Insight:** The “a-ha” moment occurs when the right mental connections are made. Eureka! The person has had a moment of realization!
- **Verification:** Now, a person just has to make sure that his/her realization is right. He/she tests out his/her solution and hopefully, it works! This is a great moment in his/her learning journey. The connections he/she makes solving this problem are likely to help him/her in the future.



*Figure 18: Four stages of insight learning in a cycle*

### 10.2.4. Steps in insight learning

1. **Identifying the problem:** The learner recognizes the presence of an intervening obstacles on his way to the goal.
2. **Understanding the Problem:** The learner observes the problematic situation, analyze it and perceive the relation between the goal and the obstacles.
3. **Incubation of Ideas:** After analyzing the total situation he reaches in conclusions by means of hesitation, pause, concentrated attention etc.
4. **Trail of Mode of Response:** The learner makes initial efforts in the form of a simple trial and error mechanism.
5. **Sustained Attention:** The learner maintains frequently recurrent attention to the goal and motivation.
6. **Insight Development:** In a certain moment there is a sudden perception of the relationship in the total situation and the organism directly performs the required acts.
7. **Steady Repetition of Adaptive Behavior:** After getting an insightful solution, the individual tries to implement it in another situation.

**8. Comprehension of Ability:** The learner reaches the ability to understand the relevant parts of the situation and overlooking the irrelevant ones.

Insight learning happens regularly in each of our lives and all around us. Inventions and innovations alike are oftentimes the result of insight learning. We have all experienced the sensation of insight learning at one time or another. It is sometimes called a 'eureka' or 'aha' moment. Whatever you call it, insight learning is often at the root of creative, out-of-the-box thinking.

### 10.2.5. Implications of insight learning theory

- **From whole to parts:** The teacher should present the subject matter as a whole to facilitate insight learning.
- **Integrated approach:** While planning curriculum, gestalt principles should be given due consideration. A particular subject should not be treated as the mere collection of isolated facts. It should be closely integrated into a whole.
- **Importance of motivation:** The teacher should arouse the child's curiosity, interest and motivation. He should gain full attention of the whole class before teaching.
- **Emphasis on understanding:** It has made learning an intelligent task requiring mental abilities than a stimulus - response association. So, the learner must be given opportunities for using his mental abilities.
- **Problem solving approach:** This theory emphasis that as the learner is able to solve problems by his insight, meaningful learning, learning by understanding, reasoning, etc. must be encouraged in the school.
- **Checking of previous experiences:** As insight depends upon the previous experiences of the learner, the teacher must check the previous experiences of the child and relate them with the new learning situation.
- **Goal orientation:** As learning is a purposeful and goal-oriented task, the learner has to be well acquainted with these objectives. He should be fully familiar with the goals and purposes of every task.



#### Application activity 10.2

1. What are the educational implications of gestalt theory in daily life?
2. Describe a time when you learned something by insight. What do you believe caused your learning?

## 10.3. Behaviourism learning theory

### Learning Activity 10.3



#### Read this scenario and answer to the question below:

A customer writes a letter of thanks to a team member. In the staff meeting, the boss praises the employee mentioned in the letter and adds a 50,000RWF bonus to the employee's salary.

Why do you think the boss praises the employee? Is this having impact on employee's performance?

### 10.3.1. Description of behaviourism learning theory

Behaviourism, also known as behavioral psychology, is a theory of learning which states all behaviors are learned through interaction with the environment through a process called conditioning. Thus, behaviour is simply a response to environmental stimuli. Behaviourism is only concerned with observable stimulus-response behaviors, as they can be studied in a systematic and observable manner.

In the nineteenth century, Charles Darwin published his well-known work, *The Origin of Species*. Scientists soon realized that although humans may differ in many ways from other members of the animal kingdom, they do (at least as far as biological aspects are concerned) share many similarities with them. Studying biological processes in animals could therefore shed some light on the same processes in humans. Scientists interested in psychological processes soon followed the trend.

#### Thorndike

Around the turn of the twentieth century, Edward Thorndike attempted to develop an objective experimental method to study the behaviour of cats and dogs. He designed a so-called 'puzzle box' in which an animal was placed. Each puzzle box had a lever or mechanism that would release the door lock if the lever or mechanism was pressed. The animal had to learn to press the lever or mechanism to open the box.

Thorndike noticed that he could measure animal intelligence by using this equipment. He was particularly interested in discovering whether animals could learn through imitation or observation.

He noticed that when an animal found itself in a problem situation it had encountered before, it was more likely to perform the same action that had earlier brought the desired reward.

The reward of being freed from the box strengthened the association between the stimulus (being placed in a closed box) and an appropriate action. Thorndike concluded that rewards act to strengthen stimulus-response associations. This basic principle he applied to humans by claiming that humans develop a myriad of stimulus-response associations.

### **10.3.2. Criticism of Behaviourism**

Behaviourism is unbelievably simple in its assumption that a single mechanism like conditioning is responsible for learning. Seemingly, behaviourism does not take mental processes of learning into consideration.

Some of the criticism of behaviourism relates to the following:

- Behaviourism views learning as something that happens to a person, with the person being passive. We all know that every learner is active, both mentally and physically, when engaged in learning.
- Behaviourism does not account for all types of learning, since it disregards the activities of the mind. What goes on inside the mind of a person is of extreme importance in understanding the learning processes.
- Behaviourism does not explain some forms of learning such as the recognition of new language patterns by young children.

### **10.3.3. Applications of behavioural learning in learning & development**

Behavioural learning theory, also known as behaviourism, is a popular concept that educators and business leaders can use to encourage positive workplace behaviors. Individuals learn how to act through their interactions with others in their environment, according to behavioural learning. Understanding how people learn can help you interact with customers and co-workers in the workplace, as well as advance your career. In this article, we explain behavioural learning theory, discuss three types of behavior, outline how they work, and offer suggestions for how to use them in the workplace. Leaders in learning and development can use behavioural learning in the workplace to increase employee engagement, improve performance, and even pursue behaviour modification of less engaged employees.

The key is to create the right environment with a “conditioned stimulus”—a reward that prompts employees to perform a desired response or behavior.

This strategy works for any behavior, whether it's curiosity, continuous learning, or taking the initiative. After all, continuous learning is essential for business growth and innovation. Introduce self-directed learning and gamification, as well as active and social learning techniques, to your team to help them succeed.

Some examples of ways to incorporate positive behavioural learning techniques in the workplace can include:

- Positive social learning for training. When training or implementing new programs, trainers can use concepts like engaging videos that show the desired behaviours in a fun way.
- Anecdotal stories to encourage positive behaviour outcomes. Sometimes, people respond better when they can relate to how others have successfully implemented new behaviours and hear resulting positive reinforcements.
- Role-playing to teach desired behaviours. Play-acting can allow people to experience different sides of situations. It can encourage positive behaviours, show alternative consequences of negative behaviours, and provide opportunities for people to show empathy for colleagues in potential real-life situations.
- Guest lecturers or industry leaders to encourage new behaviours. Research suggests social learning can be more effective when people respect their trainers. This technique can encourage employees to emulate similar positive behaviours of people they admire.
- Consistent approaches and reinforcements. Consistent expectations for all employee levels can be important to build trust within the workforce. Trust encourages people to make better behaviour decisions, especially when employees see their leaders as role models.
- Repetition to reinforce behaviours. Repetition can help to reinforce desired behaviours. Managers can use monthly training sessions, or self-guided exercises employees can complete for positive rewards, as possible good options.
- Regular reviews or assessments of employee performance. Reviewing performance and learning outcomes can be an important tool to help people assess their progress.



### Application activity 10.3

Explain the implication of behaviourism theory of learning in our daily life.

## 10.4. Cognitive learning theory

### Learning Activity 10.4



1. Why do some people learn, and recall information learned more than others?
2. What can be done to improve that learning?

#### 10.4.1. Description of cognitive learning theory

Cognitive learning theory is concerned with the internal processes that surround information and memory. In the 1930s, Jean Piaget founded cognitive psychology in response to the prevalent behaviourist school of psychology. A schema, according to Piaget, is the fundamental unit of knowledge, and schemata accumulate over a lifetime. Instead, his research and writing focused on internal mental processes. He saw human subjects as beings who not only react to their surroundings, but also process and store information about those surroundings.

#### 10.4.2. Accommodation and assimilation in cognitive theory

Piaget saw human development as a multistage process of building knowledge. From their first breath, infants learn basic motor functions, like learning to grasp objects. By adulthood, these functions are essentially second nature, and people can grapple with concepts that are very complex, like philosophy or mathematics. Piaget sought to break knowledge (no matter how simple or complex) into a single, basic unit. From there, he could develop a theory of cognitive learning that could apply just as much to a baby's first step to deep philosophical concepts they might develop later in life. Piaget called this basic unit schema.

**Schemata:** Piaget defines a schema as “a cohesive, repeatable action sequence possessing component actions that are tightly interconnected and governed by a core meaning.” For example: A child recognizes a cow on a farm. The “cohesive, repeatable action” is the child's recognition of the cow. It is repeatable in that that the child will continue to recognize it (and animals identical to it) as a cow. This action of recognition can be broken down into its components: The child doesn't just see a cow. They see a thing that is alive, has four legs, is eating grass and makes a mooing sound.

These acts of recognition, of course, can be broken down further. The child must have some concept of what a live thing is, how to count to four and so on. For the child, all these various components form the “core meaning” of a cow.

Even when the child leaves the farm, they will still have an understanding and concept of what a cow is and isn't.

That is a basic example, but Piaget argues that schemata essentially form the basis of every human cognitive process. They are:

- Perceiving
- Recognizing
- Conceiving
- Reasoning

People form new and ever more complex schemata, which build from other schemata. According to cognitivists, schemata form the basis of those and all other concepts.

### **Schemata formation**

Piaget outlines a four-step process in the formation of schemata:

- Assimilation
- Disequilibrium
- Accommodation
- Equilibrium

#### **Step 1: Assimilation**

Assimilation is the cognitive process of associating new information to what is already known or the arrangement of new knowledge inside our heads beside what we know. This prior knowledge can be innate, like knowing how to breathe, or something learned previously. To return to our earlier example, let's say the child has only seen a cow in picture books. Seeing a cow in person gives them an additional sense of what a cow looks like and how it behaves. This will be "assimilated" into the schema that is the child's recognition of the cow.

#### **Step 2: Disequilibrium**

Let's say the child goes to the farm and recognizes a cow. They point out that it has four legs, eats grass and lives on a farm, all characteristics that this cow shares with the cow in the picture book.

However, instead of the mooing sound that the child expects from a cow, the animal makes a "baa" sound. On closer inspection, this cow has a large puffy white fleece coat, very different from the cow in the picture book. The disruption or "disequilibrium" occurred because the child's cow-recognition schema did not include this sound or this coat. Of course, we know that the "cow" is a sheep. How will the child come to this conclusion, however, and form their own sheep recognition schema?

### Step 3: Accommodation

Taking new information into account by modifying what we already know. The child will attempt to resolve this disequilibrium through a process called “accommodation.” They will compare and contrast their concept of a cow with the mystery animal currently in front of them. They will notice that though both a cow and this animal share many aspects (four legs, eating grass) they contrast in notable ways (different sounds, different coats.) Though they may not have a name for it, they will conclude that, despite some similarities, this animal is not a cow. This might prompt the child to turn to a parent or caregiver, who will tell them that it’s a sheep. Subconsciously, the child will do two things at this point, both of which are components of accommodation. First, they will adjust their existing cow-recognizing schema to be able to recognize cows as not sheep. Then they will produce a new schema to recognize sheep by their specific attributes, and not by the attributes of a cow.

### Step 4: Equilibrium

Balancing what we already know with the new information that we are trying to acquire. By the end of this accommodation process, the child is equipped with a stable understanding of what a cow is and is not, as well as what a sheep is and is not. Upon seeing either of these animals, they will not need to readjust their schema. That is, unless they encounter new information that causes disequilibrium and the whole process to begin again. In this way, schema-building is a constant, cyclical and lifelong process. This same process will allow the child to build and categorize their schemata to include more-complex concepts, such as how a farm works or the ethics of eating meat, which will (in part) rely upon the recognition schema they developed when they were young.

#### 10.4.3. Benefits of Cognitive Learning

The following are the major positive effects of cognitive learning:

- **Enhances learning.** Cognitive learning theory enhances lifelong learning. Workers can build upon previous ideas and apply new concepts to already existing knowledge.
- **Boosts confidence.** Employees become more confident in approaching tasks as they get a deeper understanding of new topics and learn new skills.
- **Enhances Comprehension.** Cognitive learning improves learners’ comprehension of acquiring new information. They can develop a deeper understanding of new learning materials.

- **Improves problem-solving skills.** Cognitive learning equips employees with the skills they need to learn effectively. They are thereby able to develop problem-solving skills they can apply under challenging tasks.
- **Help learn new things faster.** Through the experience of learning, the employee will be able to recycle and use the same learning methods that worked previously. This will help them learn new things a lot faster as they already know what works for them when it comes to obtaining new knowledge.
- **Teaches to form concept formation (think abstract).** Cognitive learning can also teach your employees to form a range of different concepts such as easily perceiving and interpreting information that could boost creativity and lead to innovations at the workplace.

#### 10.4.4. Application of cognitive learning theory in daily life

When creating learning and development programs for new employees, managers can utilize cognitive learning concepts to produce better outcomes. Some cognitivist-informed strategies might include:

- Surveying employees about their knowledge of a subject.
- Implementing self-paced programs.
- Providing opportunities for employees to ask questions and communicate with one another.
- Allowing employees to share their thoughts on how the program can be improved.
- Whether in the form of surveys or Q&A sessions, incorporating employee input can help personalize training. This input emphasizes the importance of each employee's individual knowledge, giving them a pathway to connect what they know to what they have to learn.



#### Application activity 10.4

Suggest tips of educational implication on cognitivism theory in daily life.

## 10.5. Constructivism learning theory

### Learning Activity 10.5



1. a) What is happen on this picture?  
b) Is this activity important? If yes, why?)
2. Based on the processes of assimilation and accommodation learnt in previous lesson, read this concrete example and make a reflection on it.  
*“If I believe that friends are always nice and meet a new person who is always nice to me, I may call this person a friend, assimilating them into my schema. Perhaps, however, I meet a different person who sometimes pushes me to try harder and is not always nice. I may decide to change my schema to accommodate this person by deciding a friend doesn't always need to be nice if they have my best interests in mind”.*

### 10.5.1. Description of Constructivism learning theory

Constructivism is ‘an approach to learning that holds; that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner’. Constructivism is founded on the notion that individuals actively establish their understanding through experiences, rather than just passively accepting information. As individuals experience the world and reflect upon their experiences, they build on their learning and add new details into their pre-existing knowledge. Teachers that understand the Constructivist Learning Theory believe that each student brings a unique experience to the classroom. Also, they acknowledge that a student’s previous knowledge and background affects his ability to learn.

## 10.5.2. Principles of constructivism

There are many specific elements and principles of constructivism that shape the way the theory works and applies to students. Learn about the different principles of constructivism and how they make up the whole theory.

- **Knowledge is constructed.** This is the basic principle, meaning that knowledge is built upon other knowledge. Students take pieces and put them together in their own unique way, building something different than what another student will build. The student's previous knowledge, experiences, beliefs, and insights are all important foundations for their continued learning.
- **People learn to learn, as they learn.** Learning involves constructing meaning and systems of meaning. For example, if a student is learning the chronology of dates for a series of historical events, at the same time they are learning the meaning of chronology. If a student is writing a paper about history, they are also learning principles of grammar and writing as well. Each thing we learn gives us a better understanding of other things in the future.
- **Learning is an active process.** Learning involves sensory input to construct meaning. The learner needs to do something to learn, it's not a passive activity. Learners need to engage in the world, so they are actively involved in their own learning and development. You can't just sit and expect to be told things and learn, you need to engage in discussions, reading, activities, etc.
- **Learning is a social activity.** Learning is directly associated to our connection with other people. Our teachers, our family, or peers, and our acquaintances impact our learning. Educators are more likely to be successful as they understand that peer involvement is key in learning. Isolating learnings isn't the best way to help students learn and grow together. Progressive education recognizes that social interaction is key to learning and they use conversation, interaction, and group applications to help students retain their knowledge.
- **Learning is contextual.** Students don't learn isolated facts and theories separate from the rest of their lives—they learn in ways connected to things they already know, what they believe, and more. The things they learn and the points they tend to remember are connected to the things going on around them.
- **Knowledge is personal.** Because constructivism is based on person's own experiences and beliefs, knowledge becomes a personal affair. Each person will have their own prior knowledge and experiences to bring to the table. So the way and things people learn and gain from education will all be very different.

- **Learning exists in the mind.** Hands-on experiences and physical actions are necessary for learning, but those elements aren't enough. Engaging the mind is key to successful learning. Learning needs to involve activities for the minds, not just our hands. Mental experiences are needed for retaining knowledge.
- **Motivation is key to learning.** Students are unable to learn if they are unmotivated. Educators need to have ways to engage and motivate learners to activate their minds and help them be excited about education. Without motivation, it's difficult for learners to reach into their past experience and make connections for new learning.

### 10.5.3. Types of constructivism

There are different types of constructivism that educators can use to find success with this learning theory.

**Cognitive:** Cognitive constructivism focuses on the idea that learning should be related to the learner's stage of cognitive development. These methods work to help students in learning new information by connecting it to things they already know, enabling them to make modifications in their existing intelligence to accommodate the new information. Cognitive constructivism comes from the work of Jean Piaget and his research on cognitive development in children.

**Social:** Social constructivism focuses on the collaborative nature of learning. Knowledge develops from how people interact with each other, their culture, and society at large. Students rely on others to help create their building blocks, and learning from others helps them construct their own knowledge and reality. Social constructivism comes from Lev Vygotsky and is closely connected to cognitive constructivism with the added element of societal and peer influence.

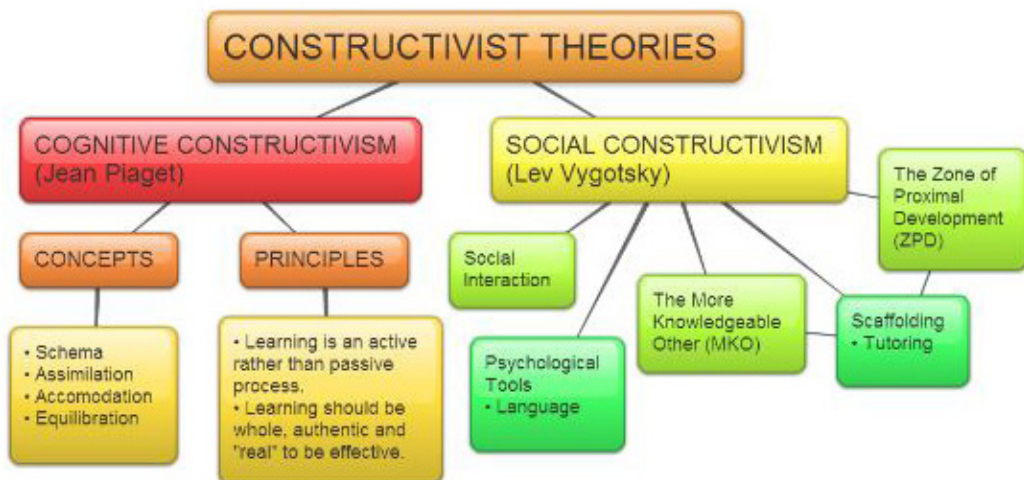


Figure 19: Constructivist theories

**Radical:** Radical constructivism was proposed by von Glasersfeld, who provides a pragmatic approach to problems related to truth, reality and human understanding. In this theory, von Glasersfeld contended that we developmentally build our understanding and our concepts about the world. Radical constructivism is relatively different from social and cognitive constructivism. It focuses on the notion that students and the knowledge they construct do not tell things that are real, only help people to live and work in their environment. The basic idea is that knowledge is developed, not discovered. The stuff we discuss on the table is just interpretations of knowledge, which makes it difficult for us to know the truth.



### Application activity 10.5

Make a brief description of applying constructivism theory of learning in the community.

## 10.6. Social constructivism theory (Lev Vygotsky)



### Learning Activity 10.6

**Read this short story and reflect on it.**

A primary physical education teacher is teaching her students the basics of football. She describes the different positions that team members might play and explains the specific roles that players in each position have. She breaks the class into two teams of eleven players each and assigns each student a specific position on the field. Yet once the ball is in motion, everyone on the field immediately runs for it, resulting in a game of “magnet” ball.

- After reading this story, what do you think is missing?
- How can you change the situation?

### 10.6.1. Description of social constructivism learning theory

Social constructivism is a sociological theory of knowledge where in groups, students construct knowledge for one another, collaboratively creating a small culture of shared artifacts with shared meaning. Its origins are largely attributed to **LEV VYGOTSKY**. He believed that young children are curious and actively involved in their own learning, discovery and development of understanding new schema. However, he placed more emphasis on social contributions to the process of development.

According to Vygotsky, much important learning by the child occurs through social interaction with skilful teacher. The teacher may model behaviour and provide verbal instructions to a child. Vygotsky refers to this as co-operative/collaborative dialogue. The child seeks to understand the actions, instructions provided by the tutors (often parents or teachers) then, internalize the information using it to guide or regulate his own performance.

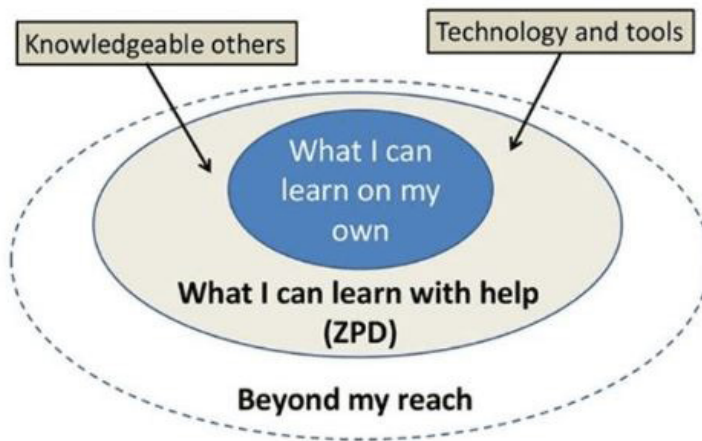
Examples: A young girl was given her first Jigsaw: alone she performs poorly in attempting to solve puzzle. The father then sits with her and describes or demonstrates some basic strategies such as finding all the corner/edge pieces and provides a couple of pieces for the child to put together herself and offers encouragement when she does so. As a child becomes more competent the father allows the child to work more independently.

According to Vygotsky, this type of social interaction involving co-operative or collaborative dialogue promotes cognitive development. For him, knowledge can best be advanced through interaction with others in cooperative activities (Woolfolk, 2013).

In order to understand Vygotsky's theory, one must understand the main principles of Vygotsky's work which are:

- **MKO (More Knowledgeable Others):** It refers to someone or instrument (technology) who/that has better understanding or higher ability level than the learner with respect to a particular task, process or concept. Although the implication is that the MKO is a teacher or older adult, this is not the case. Many times, a child's peers or an adult's children may be the individuals with more knowledgeable or experience. The key to MKO is that they must have more knowledge about topic being learned than the learner does.
- **ZAD (Zone of Actual Development):** It refers to the tasks that a child can complete by himself. It is his ability that he already possesses to perform a certain task at a certain degree.
- **ZPD (Zone of Proximal Development):** It refers to skills (tasks) too difficult for a child to master on his/ her own but that can be done with guidance and encouragement from adults or more skilled children. This concept of ZPD is related to "difference/gap between what a child can achieve independently and what a child can achieve with guidance and encouragement from skilled pattern." As an example, given above: a child could not solve the jig saw puzzle by himself and would have taken a long time to do so, but he was able to solve it following interaction with his father and has developed competence of this skill that will be applied to future jig saws.

Vygotsky sees ZPD as an area where the most sensitive instruction or guidance should be given allowing the child to develop skills they will then use on their own development of higher mental function. He views interaction with peers as an effective way of developing skills and strategies. He suggested that “teachers use cooperative learning exercises where less competent children develop with help from more skilful peers within the zone of proximal development.



*Figure 20: Zone of proximo development (ZPD)*

- **Scaffolding:** Scaffolding instruction as a teaching strategy originates from Lev Vygotsky’s theory. In scaffolding, a more knowledgeable other provides scaffold (supports to facilitate the learner’s development). Those scaffolds facilitate students’ ability to build on prior knowledge and internalize new information. The activities provided in scaffolding instruction are just beyond the level of what the learners can do alone. The more capable other provides a scaffold so that learner can accomplish the tasks she/ he could not complete.

Vygotsky also talked about “language” as a tool of communication where he believed that language develops from social interactions for communication purposes. Later, language ability becomes internalized as thought and inner speech. Thought is a result of language. Vygotsky stresses the importance of socialization in the development of thought and language. He believed that speech was originally social in nature and used as a communication tool (Woolfolk, 2013).

## 10.6.2. Educational implications of social constructivism theory

When engaged in the process of teaching and learning, educators should consider the following:

- **Use of zone of proximal development:** Teaching should begin toward the zone's upper limit, where the student is able to reach the goal only through close collaboration with the instructor.
- **Use scaffolding:** Look for opportunities to use scaffolding when students need help with self-initiated learning activities. Use it also to help students move to a higher level of skill and knowledge.
- **Use more-skilled peers:** As teachers, remember that it is not just adults that Vygotsky believed are important in helping students learn important skills. Students also benefit from the support and guidance of more skilled students.
- **Encourage collaborative learning** and recognize that learning involves a community of learners. Both students and adults engage in learning activities in a collaborative way.
- **Consider the cultural context of learning:** An important function of education is to guide children in learning the skills that are important in the culture in which they live.
- In social constructivism learning: Teachers should encourage team working and collaboration; Promote discussion and debate; Set up study group for peer learning;
- In social constructivism, teachers (tutor) or peers play a vital role in learning: Teachers should be a facilitator (guider) by helping students to collaborate not to make competition.



### Application activity 10.6

After learning this lesson, read the scenario and answer to questions.

*Selena is learning how to play the trumpet. She still has trouble with some of the high notes but does better when her teacher reminds her what she needs to do.*

Describe social constructivism theory of learning according to Vygotsky referring to the scenario above.

## 10.7. Social learning theories

### Learning Activity 10.7



1. Make a brief comment about this Rwandan proverb “Kora ndebe iruta vuga numve”. How can you apply this proverb in learning process?
2. What do you think will happen if a young child observes his friend being rewarded for his good performance?

### 10.7.1. Description of social learning theory

The philosophy of social learning theory holds that people can learn from one another through observation, imitation, and modelling. Albert Bandura, a psychologist, proposed the concept, which combined ideas from behaviourist and cognitive learning approaches. Social learning theory seeks to investigate socialization and how it influences human behavior. Albert Bandura External link: [open in new](#) conducted a series of experiments in 1961 and 1963 to see if social behaviors (aggression) could be learned through observation and imitation. The study, which involved children watching a model punch an inflatable doll, appeared to support the idea that children mimic their behaviour by watching others. The Bobo doll experiments were a grouping of these experiments.

### 10.7.2. Components of Social Learning

- **Observation:** Social learning works by observing the behaviour of other people. The consequences of specific situational actions are observed, then that behaviour is mirrored depending on the outcome of the consequence. In this way, people learn which behaviours are socially acceptable and which behaviours are usually criticised. Observational learning allows people to adapt and approach situations more confidently quickly.
- **Assessment:** Next, we assess whether the observed person’s behaviour fits our personality and whether the results and reactions of others are desirable. If we decide that we would like to be praised and recognised for something, we analyse how the observed person came to this result. There is often not enough data to know on which factors the desired reaction depends. Therefore, it is often necessary to observe similar situations repeatedly to develop a better understanding.

- **Imitation:** After observation and assessment of a particular behaviour, imitation follows to achieve the desired consequence. Imitation can only happen within our personal limitations, e.g. physical traits, characteristics, and experiences. In most cases, the consequences of a behaviour depend on several factors. The views of the other person, place, time, one's character, the situation, everything can play a role in how others react to something. Therefore, it usually takes repeated positive feedback for a behaviour to become a habit, but it only takes a little criticism to avoid it in the future.
- **Identification:** A large part of social learning is based on the idea that people want to identify with others and their achievements or earn the appreciation of those role models. As it is understood in social learning, identification is comparable to the Freudian notion of the Oedipus complex. A part of this concept is about internalising or adopting the behaviours of other people.

While the term imitation refers to only a single aspect, identification is about several learned behaviours coming together. Imitations, such as language use, attitude, habits, or views, help people achieve feeling similar to role models.

It is important to emphasise that while social learning is based on imitating another person's behaviour, it can have completely different consequences. People are individuals, and so are the results of behaviour. Social learning should serve as a way to help you see if others' successful behaviours work for you as well. However, it should not become a direct comparison of results. It is about trying new techniques, habits, and behaviours for yourself, but you should not expect to get the exact same results as your role model. Social learning is not about becoming a different person or modifying your personality to be more like someone else. It is about improving your skills and thus becoming better than you were yesterday.

### 10.7.3. Stages of social learning theory

The basis behind social learning theory is that people observe the behavior, attitudes and consequences of others and then use that information to form their own actions. The key concepts behind this process include four basic learning requirements. These four concrete stages of social learning within social learning theory include attention, retention and memory, initiation and motor behavior, and motivation.

- 1. Attention.** For a lesson or experience to have an impact on an observer, the observer must be actively observing their surroundings. It helps if the observer identifies well with the model or feels positive feelings about them. In addition, it helps if the observer is invested in the process of observing or feels strong feelings about the experience that they are observing. Factors that might affect attention include complexity, distinctiveness and functional value.
- 2. Retention and memory.** For any learned experience to make a lasting impact, the observer needs to be able to remember it later. Once the observer can recall the experience, it also helps if they go over the experience, either revisiting it cognitively in their mind or even acting it out physically. For example, a toddler may learn from an adult not to throw things and later they may be observed teaching one of their stuffed animals that it's not okay to throw.
- 3. Initiation and motor capability.** In order to carry out the lesson learned; the observer needs to be able to actually reenact it. Learning the necessary skills is an important part of the process before a behaviour can be modelled. When a person has effectively paid attention to modelled behaviour and repeats or demonstrates it, they have achieved the necessary skills.
- 4. Motivation.** Even if an observer has focused on a lesson, remembered all the details and learned the necessary skills to do it, they still need to have the motivation to make it happen. The source of motivation could include anything from external rewards and bribes, observations that similar behaviour is rewarded, desire to be like the model who demonstrated the behaviour or internal motivation to improve or learn. Other factors that impact motivation include personal characteristics, past experiences, promised incentives, positive reinforcement and punishments.

These principles make up the social learning theory modelling process that determines whether the influence is successful or not. The behavioral models used in social learning theory can be demonstrated live, verbally or even symbolically.

#### **10.7.4. Assumptions of Social Learning Theory**

- *People learn through observation.* Learners can acquire new behaviour and knowledge by merely observing a model.
- *Reinforcement and punishment have indirect effects on behaviour and learning.* People form expectations about the potential consequences of future responses based on how current responses are reinforced or punished.

- *Mediational processes influence our behavior.* Cognitive factors that contribute to whether a behaviour is acquired or not.
- *Learning does not necessarily lead to change.* Just because a person learns something does not mean they will have a change in behavior.

### 10.7.5. Applications of social learning theory

Social learning theory can be applied to several use cases outside of psychology:

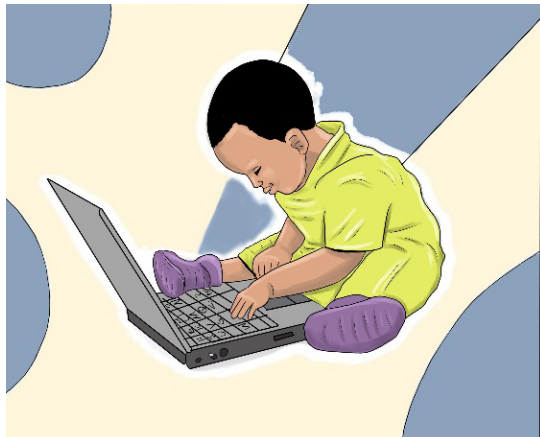
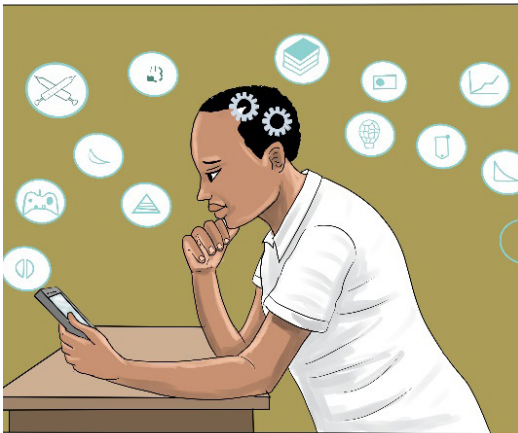
- **Human resources (HR)** - HR professionals can use social learning theory techniques to increase employee retention. For example, correcting errors as they occur before they become routine habits, simply encouraging positive behavior, and assigning weight to mistakes.
- **Training and educational development** - Social learning theory in training is similar to the concept of learning by doing. New employees may best learn their role by imitating or repeating the behaviors of their boss or someone in the same position.
- **Marketing** - Advertisements and marketing materials can incorporate the social learning theory to reach target audiences and encourage the purchase of a product. For example, a company might suggest that a certain desired lifestyle or characteristic will be the outcome of buying their service.
- **Machine learning** - Social learning theory can be applied in training machine learning algorithms for purposes such as cognitive computing and robotics.
- **Law enforcement** - Criminal justice professionals often use social learning theory to explain or identify learned illicit behavior. Additionally, it can be used to research the effect of media violence on human behavior. Sometimes, criminal justice professionals can discover patterns of behaviour in large communities and create programs and educational tools to help intervene when a crime would likely be committed. For instance, in an area with a high rate of theft in an isolated public parking lot, simply putting up signs reminding people to take their belonging with them or lock up their cars can greatly reduce the number of thefts in that location. In other situations, helping young adults to have healthy resources to deal with loss or grief can prevent them from acting out and getting in trouble later in life.



## Application activity 10.7

1. Discuss how principle of social learning can be applied in teaching and learning process.
2. Explain the process of observational learning theory?
3. Imagine that you had a 12-year-old brother who spent many hours a day playing violent video games. Basing your answer on the material covered in this lesson, do you think that your parents should limit his exposure to the games? Why or why not?
4. How might we incorporate principles of observational learning to encourage acts of kindness and selflessness in our society?

## 10.8. Connectivism Learning Theory



### Learning Activity 10.8



**Read the following testament and answer if it true or false and after, comment of it.**

You start a blog about cooking. You enable comments, post videos of your recipes, and answer questions of your readers on a weekly basis. Readers begin to post their own recipes to the comments section of the blog and discuss amongst themselves solutions to problems and different ideas on the topic of cooking. Is it true or false that You have created a network?

### 10.8.1 Description of Connectivism Learning Theory

George Siemens and Stephen Downes, two theorists, first proposed connectivism in 2005. In 2004, Siemens' article *Connectivism: Learning as Network Creation* was published online, and the following year, Downes' article *An Introduction to Connective Knowledge* was published.

Connectivism is a relatively new learning theory that proposes that students combine their thoughts, theories, and general knowledge in a useful way. It recognizes that technology is an important part of the learning process and that our constant connectivity allows us to make choices about our learning. It also encourages group collaboration and discussion, allowing for different points of view and perspectives when making decisions, solving problems, and making sense of information. Connectivism encourages learning that occurs outside of an individual, such as via social media, online networks, blogs, or information databases.

Connectivism is based on the idea that digital technology connects people and opens up new learning opportunities. Despite being one of the more recent learning theories, connectivism is already transforming workplace training practices. Connectivism provides a framework for L&D to rethink existing processes and training as today's workforce shifts toward remote work and remote learning.

**Nodes and Links in Connectivism.** Learning, according to connectivism, is more than our own internal construction of knowledge. Rather, what we can access through our external networks is also considered learning.

This theory gave rise to two commonly used terms: nodes and links, which describe how we acquire and connect information in a network. Students are viewed as "nodes" in a network in connectivism. A node is any object that can be linked to another object, such as a book, webpage, person, and so on. Connectivism is the theory that we learn when we make connections, or "links," between different "nodes" of information, and we continue to make and maintain connections to form knowledge.

# Connectivism

learner = node in a self-arranged network  
viewpoint of learning = internal and external

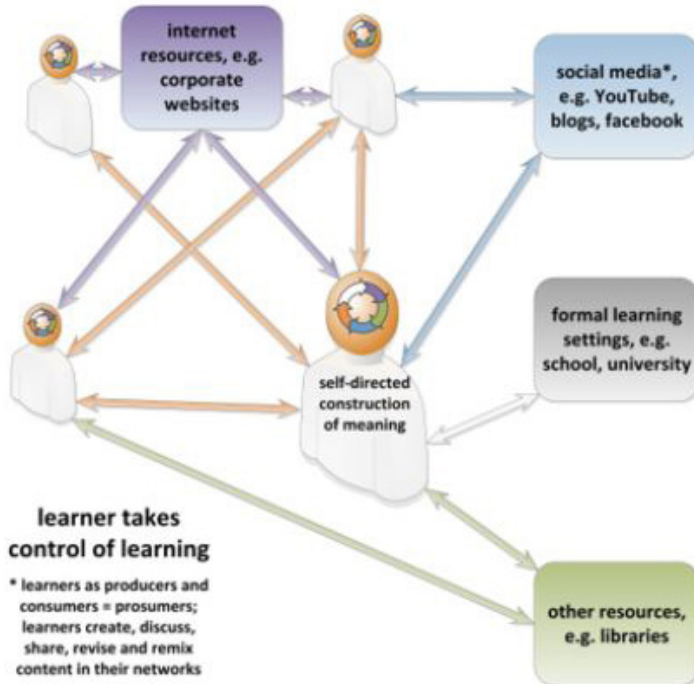


Figure 21: Connectivism

## 10.8.2. Principles of Connectivism

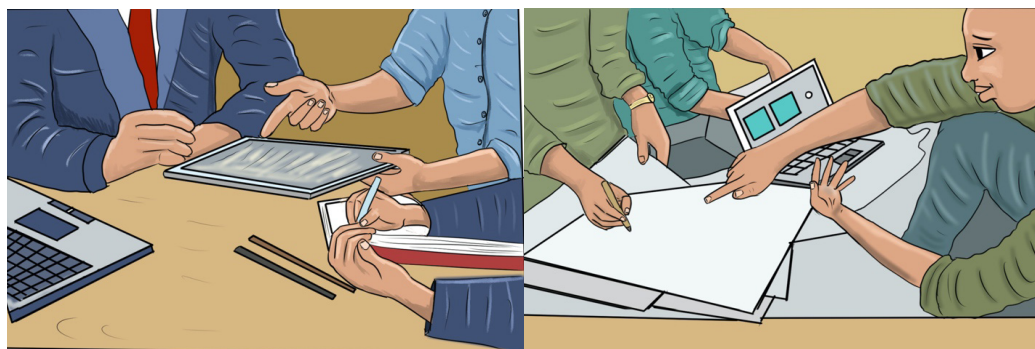
Connectivism proposes that technology is changing what, how, and where we learn, building on previously established theories. Siemens and Downes identified eight connectivist principles in their research.

1. Learning and knowledge are founded on a diversity of viewpoints. Perspectives from various sources broaden our understanding.
2. Learning is a connecting process. When we form relationships with colleagues, we expose ourselves to new skills, thoughts, and ideas that we might not have had access to otherwise.
3. Non-human appliances may be capable of learning. Learners may save information digitally, such as in an app, a social media post, or a video. Similarly, a learning community may keep information in a database or forum.
4. The ability to learn more is more important than what is currently known. "Our ability to learn what we need for tomorrow is more important than what we know today," Siemens says.

5. To facilitate continuous learning, connections must be nurtured and maintained. Collaborative social interaction connects people and creates a long-term learning environment.
6. A key skill is the ability to see connections between fields, ideas, and concepts. We must learn how to construct a bridge to connect points A and B. That bridge is a new learning opportunity in and of itself.
7. The goal of all Connectivist Learning is to provide accurate, up-to-date knowledge. Our understandings are constantly reinforced and updated when we work together.
8. Making decisions is a learning process in and of itself. What we know today may not be the case tomorrow. If the goal of connectivism is to provide up-to-date information, we must accept that our knowledge will need to evolve as new understandings emerge.

Prior to the introduction of these principles, many theories viewed students solely as information receivers. Connectivism, on the other hand, supports the theory that knowledge is distributed across networks and that connections and connectedness inform learning.

### 10.8.3. Application of Connectivism



Understanding connectivism is one thing; incorporating it into learning activities in the classroom is another. Remember that the new learning responsibilities shift from the teacher to the learner in a connectivist perspective. In contrast to traditional teaching methods and other theories such as constructivism or cognitivism, the educator's role is to guide students in becoming effective agents for their own learning and personal development. In other words, it is the learner's responsibility to design their own learning experience, make decisions, and expand their learning networks.

Because connectivism is heavily reliant on technology, the first step in developing a connectivist classroom is to increase opportunities for digital learning, such as online courses, webinars, social networks, and blogs. Here are some more ideas for incorporating connectivism into the classroom:

### **Social networking sites**

Connectivism can be implemented in the classroom by using social media. A class Twitter account, for example, can be used to share information, engage in discussion, or announce homework assignments. This can help increase class engagement and open the lines of communication between students and teachers.

### **Gamification**

Gamification transforms assignments and activities into a competitive game to make learning more interactive. There are numerous learning-based apps and instructional technologies that teachers can use to incorporate gamification into the classroom. DuoLingo, an online learning tool that helps students learn languages through fun, game-like lessons, is one example. Teachers can monitor students' progress, and students can earn "points" for completing lessons. Apps such as Brainscape, Virtual Reality House, and Gimkit are some other examples.

### **Simulations**

In contrast to surface learning, which only requires memorization, simulations engage students in deep learning that empowers understanding. They also add interest and fun to the classroom. Consider a physics class in which students use an online program to create an electric circuit. Instead of being taught through a book or a classroom lecture, they learn about physics by simulating a real-world physical setup.

Including some or all of these examples is an excellent way to give your students more control over the pace and content of their learning. It also allows for individualized learning to meet each student's specific needs and strengths.

#### **10.8.4. The Benefits of Connectivism**

- Connectivism in the classroom can benefit both students and teachers. Following are advantages to implement this theory in the current or future classroom:
- It creates collaboration: Learning occurs in connectivism when peers are connected and share opinions, viewpoints, and ideas in a collaborative process. Connectivism allows a group of people to legitimize their actions, allowing knowledge to spread more quickly across multiple communities.

- It gives students and teachers more power: Connectivism shifts the burden of learning from the teacher to the student. It is the learner's responsibility to design their own learning experience. The educator's role then shifts to "creating learning ecologies, shaping communities, and releasing learners into the environment" (Siemens, 2003).
- It values diversity: Individual perspectives and diversity of opinion are supported by connectivism, which theoretically allows for no hierarchy in the value of knowledge.

### 10.8.5 The disadvantages of Connectivism

The disadvantages of connectivism include the following:

- Teachers may have difficulty transitioning to new roles (leadership role to a partnership role).
- Students learn according to their ability level instead of age-level (this might be seen as an advantage in some respects.).
- Students feel anxiety from being singled out according to their ability levels.
- Students are labelled and grouped according to ability level.



#### Application activity 10.8

Suggest different ideas for incorporating connectivism into the classroom and explain how

## 10.9. Comparison of theories of learning



#### Learning Activity 10.9

There are no good or bad learning theories. Briefly comment on this statement.

The following is the table showing the comparison of these learning theories:

*Table 16: Comparison of theories of learning*

<b>Learning Theories Comparison</b>	<b>Behaviorism</b>	<b>Constructivism</b>	<b>Cognitivism</b>	<b>Connectivism</b>
<b>Main Focus</b>	Stimulus-Response	The student constructs his/her own learning	Emphasis on the thought process during learning	Learning means building a network
<b>Main Theorists/ Influencers</b>	Ivan Pavlov, B.F. Skinner, Throndike, J.B. Watson	Lev Vygotsky, Jean Piaget, Jerome Bruner	Jerome Bruner Leo Postman Cecile C. Goodman Albert Bandura Richard Mayer, John Sweller	George Siemens, Stephen Downes
<b>Key Concepts</b>	Behaviourists focus only on observable stimulus-response behaviors, since they believe it is not possible to observe what happens inside the learners' brain.  Experience and environment dictate how learners behave.	Learners are not passive respondents to stimuli but are active participants in constructing their own learning.  Knowledge is not exclusively received or shaped by the features of the mind but is also actively built by human work and interaction.  Learners' background, perceptions and perspective affect their learning and they are foundations to build upon.	Internal learning processes are important to learning, such as attention and memory.  Learners produce original thoughts during the learning process, and they are able to make predictions, create and invent things.	Knowledge exists outside of the learners. Learners make connections between information to build knowledge.  Learning rests in diversity of opinions.

	<p>Learning is defined as a change in the behaviour of the learner and can be promoted by reinforcements and punishments applied with appropriate schedules.</p> <p>Classical Conditioning (Pavlov &amp; Watson): Involves learning to associate and unconditioned stimulus that already brings about a particular response with a new stimulus, so that the new one brings out the same response.</p> <p>Conditional Conditioning (Skinner): Behaviour which is reinforced tends to be repeated, and behaviour that is not, tends to be extinguished.</p>	<p>Social Constructivism (Vygotsky): We learn and develop through social interactions, with language playing a key role.</p> <p>Zone of Proximal Development (Vygotsky): The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers.</p> <p>The More Knowledgeable Other (MKO) (Vygotsky): Someone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process or concept.</p> <p>Frequently, an instructor or a peer.</p>	<p>Mental processes are shaped by past experiences and learning is affected when new knowledge is presented in a way that is different from the learners' current schemas.</p> <p>The learning process is more important than the content to be taught.</p> <p>Cognitive Load Theory (CLT): The learners' mind can only hold information in the working memory (short term) until it is processed to pass into long term memory. Working memory's capacity is very limited.</p> <p>Social Cognitivism: Learning takes places interpersonally, much comes through observation and imitation.</p>	<p>Learning may reside in non-human platforms.</p> <p>The ability to identify connections between concepts is important.</p> <p>Ability to know more is more important than what is currently known.</p> <p>Decision-making is a learning process as information can change and get obsolete from one day to another.</p> <p>Maintaining connections is needed for learning.</p>
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		<p>Scaffolding theory (Bruner):</p> <p>As learners begin to build on their prior knowledge and schemas, they require active support from instructors to be successful.</p> <p>As learners' progress and their dependence on instructor lessens, the instructor allows more independence.</p>	<p>Self-efficacy (the learners believe that he/she is capable of doing something. Self-efficacy can be increased by experiences where the learner masters something challenging.</p>	
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<p><b>Classroom and Instructional Strategies</b></p>	<p>The instructor controls the learning environment.</p> <p>Repetitive drills, question and response, memorization, lectures, token economy, grading and praise, frequent feedback and focus on tests. Other techniques: discrimination, generalization, association &amp; chaining. Small, chunked and sequenced tasks; builds on small success to increase motivation.</p>	<p>The instructor's guides learner's interaction and knowledge building and serve as the MKO, when needed.</p> <p>Scaffolding is a key feature of effective instruction. Some scaffolding techniques are: modelling a skill, adapting instruction to learner's skill level, breaking tasks into smaller and more manageable portions, relating content to current learners' schemas, providing feedback.</p>	<p>Instruction is student-centered.</p> <p>Use of advance organizers, mnemonic, metaphors, instructional material organized from simple to complex.</p> <p>CLT:</p> <p>Instruction should be adapted to the learners' knowledge level.</p> <p>Break down complex problems into parts.</p>	<p>Instruction is network-centered.</p> <p>Lots of learning resources available: social networks (Twitter, Facebook &amp; LinkedIn groups), links to websites, YouTube videos, RSS feeds, etc.</p>
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	<p>Behaviorism has very good applications in gamification and game-based learning</p>	<p>Skills to practice: summarizing, questioning, clarifying, teamwork skills &amp; predicting.</p> <p>Constructivist learning is student-centered and includes intrinsically motivating activities, such as exploring, questioning and problem solving.</p> <p>Assessment through case studies, presentations, group-based projects, reflective journals/portfolios, role playing, etc.</p>	<p>Integrate different sources of visual information.</p> <p>Use both visual and auditory channels.</p>	<p>Ideal for research projects.</p>
<p><b>Strengths</b></p>	<p>The student can learn to respond automatically to a stimulus.</p> <p>Easy to apply.</p> <p>Learners and instructors have a clear idea of the learning objective and can quickly identify if the goal has been met.</p>	<p>Learners may adapt better to real life situations using problem solving skills.</p>	<p>Learning is structured to control learners' cognitive load so more information is transferred to long term memory, increasing retention and limiting overwhelming the learner with new knowledge. It promotes consistency on learning.</p>	<p>Knowledge can be obtained easily, quickly and be updated constantly.</p>

<p><b>Weaknesses</b></p>	<p>When the stimulus doesn't occur, the learner may not respond.</p> <p>It doesn't take into account the effect of the environment or the internal cognitive processes in shaping the learners' behavior.</p> <p>It cannot explain the development of language.</p> <p>Learners on different levels do not all benefit equally from a behavioristic assignment.</p> <p>The Hawthorne Effect: Behaviorism can only assess learners' ability at a specific moment in time rather than their propensity to perform well when not under observation.</p>	<p>When a consistent response among learners is essential, Constructivism may cause problems.</p> <p>Scaffolding may not be equally useful in all cultures for all types of learning.</p>	<p>Since learning is so structured and geared towards consistency, it may be difficult to adapt to changes in what has already been processed and learnt.</p>	<p>Lots of sources of knowledge, sometimes it's difficult to determine which ones are legitimate.</p>
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<p><b>Instructor's / Student's role</b></p>	<p>The instructor's role is to present the student with appropriate behavioural responses to stimuli and reinforce the responses at appropriate times.</p> <p>Students have a passive role, as mere recipients of the instructor's information.</p> <p>Instruction is teacher-centered.</p>	<p>The instructor's role is mediating the learners' activity as they share knowledge through social interaction and guiding discussion.</p> <p>Students are actively engaged in their learning.</p> <p>Instruction is student-centered.</p>	<p>The instructor facilitates cognitive processing and controls cognitive load. Teachers should create conditions for intuition to flourish.</p> <p>Students are active participants in their learning process.</p>	<p>Instruction comes from a variety of sources, instead of from one instructor and it's network-centered.</p>
<p><b>Motivation sources</b></p>	<p>Motivation is a response to reinforcements and punishments and the sources are only external.</p>	<p>Constructivism: Motivation is essentially intrinsic, based on the learners' internal drive. Social Constructivism: Motivation is both intrinsic &amp; extrinsic, based on the learners' internal drive, but also, motivated by rewards provided by the knowledge community.</p>	<p>Internal motivation, interest in the material to be learnt.</p>	<p>Combination of intrinsic motivation, based on the learners' drive, but also, motivated by social rewards provided by the learning network.</p>

<p><b>Best Applications for Instructional Design</b></p>	<p>Tasks requiring a low level of processing. Areas where there is only a correct response, or where material needs to be memorized and skill and drill exercises are effective.</p> <p>Foundational knowledge and processes.</p> <p>Examples: foreign language vocabulary, scientific facts and formulae, repetitive step by step processes.</p>	<p>Tasks demanding high level of processing, decision-making, problem solving and application to real life.</p> <p>Examples: Problem Based Learning (student-centered), apprenticeships, negotiation skills.</p>	<p>Complex tasks requiring a higher level of processing than behavioristic tasks that should be broken into smaller simple tasks, like problem solving.</p>	<p>Very good fit for research type of learning, especially when information need to be constantly updated, and for “just in time” learning.</p>
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### Application activity 10.9

Discuss the similarities and different between different theories of learning

## 10.7. End unit assessment



### End unit assessment

#### Question

After learning this unit, provide opinions on views laying in theories of learning and how these theories of learning can be applied in our daily life of Rwandan society.

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