COMPETENCY 1
HUMAN DEVELOPMENT AND LEARNING

Major Theories of Social and Personality Development

There are many theories in the literature of human and personality development as well as in counseling and psychotherapy. The major theories explored in this section are psychoanalytic theory (created by Freud and developed by his followers), the related psychodynamic models of Erikson and Adler, and behaviorism. In subsequent sections, we address theories of cognitive development (*see Skill 1.3*) and other theories of counseling and behavior change such as existential, person-centered, Gestalt, cognitive-behavioral, reality, and solution-focused therapies (*see Skill 3.2*).

Psychoanalytic Theory

The basis of many theories of psychology and counseling is the psychoanalytic theory of Sigmund Freud. Others who embraced psychoanalytic theory were Otto Rank, Heinz Hartman, Ernest Jones, Anna Freud, Alfred Adler, Heinz Kohut, Erik Erikson, Carl Jung, Karen Horney, Harry Stack Sullivan, John Bowlby, Margaret Mahler, Jacques Lacan, and Nancy Chodorow. Many broadened Freud's original ideas into different schools; these are often collectively referred to as psychodynamic theory and therapy.

Freud viewed human behavior as primarily the manifestation of biological and instinctive drives, unconscious motivation, and irrational forces. He divided the personality into the following parts:

1. The id, which is blind, demanding, pleasure-seeking, and insistent; its function is to lessen tension and return the psyche to a sense of homoeostasis or status quo

2. The ego, which is the arbitrator between external reality and internal impulses and experiences

3. The superego, which represents moral training and whose goal is perfection and "doing the right thing"

He also explored the concept of the unconscious by using techniques of dream analysis, posthypnotic suggestion, and free association. Anxiety and various ego-defense mechanisms were other components of the personality.

PSYCHOANALYTIC THERAPY aims to reconstruct the personality instead of solving immediate problems, with a focus on the past in order to analyze aspects of the unconscious that affect present behavior. Goals for clients include insight into their unconscious psychodynamics, greater ability to understand the connection between their past and present behaviors, and more psychological awareness.

Stages of psychosexual development

According to psychoanalytic theory, there are five stages of psychosexual development:

1. Oral: The mouth is the source of satisfaction. If one's oral needs are not met, greediness and acquisitiveness may develop as well as the rejection of others' love, fear of intimate relationships, and mistrust of others.

2. Anal: Control of the feces is the source of satisfaction. Negative feelings, including rage, hatred, destructiveness, and hostility, are experienced if the need to control one's own bodily functions is not successfully resolved.

3. Phallic: The phallus (penis/clitoris) is the source of satisfaction. Penis envy and castration anxiety are associated with this stage of development. Resolution of sexual conflicts and sex-role identity is a critical task at this stage with the Electra and Oedipus complexes resulting from difficulties associated with this stage.

4. Latency: This stage has been thought to be a relatively calm period of inward and self-centered preoccupation. If not resolved adequately, narcissistic orientation can occur. The latency period usually occurs between the ages of 5 and 12.

5. Genital: This stage is signaled by physical maturity. Preoccupation with the sex organs is possible if this stage is not adequately resolved.

PSYCHOPATHOLOGY results from failing to meet one or more critical developmental tasks or becoming fixated at an early level of development. Neurotic personality development is regarded as an incomplete resolution of one of the stages of psychosexual development. Behavior is determined by unconscious forces, early experiences, and sexual and aggressive impetus.

PSYCHOANALYTIC THERAPY: aims to reconstruct the personality instead of solving immediate problems, with a focus on the past in order to analyze aspects of the unconscious that affect present behavior

PSYCHOPATHOLOGY: results from failing to meet one or more critical developmental tasks or becoming fixated at an early level of development

Psychoanalytic therapeutic techniques

Projection of the client's feelings upon the therapist is used to facilitate therapy; this is called **TRANSFERENCE**. To enhance this process, the therapist tries to remain a "blank slate."

Other techniques used in this therapy include:

- **Maintaining the analytic framework:** The therapist strives to adhere to strict relational rules, including nondisclosure on the part of the therapist/analyst, utilizing psychoanalytic techniques maintaining the contractual agreement for payment of fees, and having sessions regularly and consistently.

- **Free association:** This technique encourages the client to say whatever comes to mind in order to reveal the unconscious and give the therapist the opportunity to interpret the unconscious thoughts.

- **Interpretation:** This is the process of analyzing the material the client reveals from the unconscious via free association and dreams.

- **Dream analysis:** This process encourages clients to report and discuss their dreams. The client is then encouraged by the therapist to free associate about various parts of the dream and symbols contained in the dream. The analyst offers interpretations.

- **Analysis and interpretation of resistance:** This technique involves an analysis of the ways the client is resisting the process of change.

- **Analysis and interpretation of transference:** In this process, the therapist interprets and discusses the significance of the transference process and the therapist–client relationship.

TRANSFERENCE: projection of the client's feelings upon the therapist

Psychodynamic theories

Subsequent developments in psychoanalytic theory that are considered "psychodynamic" are still grounded in key concepts from psychoanalytic theory. These include the role of the unconscious in conscious functioning, the relationship between childhood experiences and adult behavior, a developmental framework of personality, and some elements of the therapeutic process.

However, many of these offshoots are more likely to incorporate ideas about the role of external factors such as other people, the environment, and social norms in the development of personality as well as intervention. Psychodynamic theorists focus on the ego and its development, as well as the development of the self as an individual.

The goal of psychodynamic theories is to help the client become more aware of the unconscious, as well as to strengthen the ego system so that behavior is based upon reality. Psychodynamic theories include ego psychology, object relations, attachment theory, psychosocial theory, analytical psychology, and interpersonal therapy.

Object relations theory

OBJECT RELATIONS THEORY: focuses on predetermined stages of development in which the child focuses less and less on self and begins to see the world in relation to others

Margaret Mahler was instrumental in developing the **OBJECT RELATIONS THEORY** of psychoanalysis. This theory focuses on predetermined stages of development in which the child focuses less and less on self and begins to see the world in relation to others. As development progresses, the child transitions through the following stages:

1. Normal infantile autism, when the infant responds to physical stress, does not see a unified self, and considers self and mother as one

2. Symbiotic relationship with the mother from 1–2 months of age, when the infant is dependent upon the mother and expects emotional congruence with the mother (mother also benefits from the relationship)

3. Separation from this symbiotic relationship, which occurs as the child gains cognitive awareness of being a separate person around 16–18 months of age

4. Individualized, a process that takes place from age 18 months to approximately age 3

5. Integration of self, or maturation, as a $3\frac{1}{2}$ to 4-year-old

If a trauma occurs during the separation–individuation phase, borderline and narcissistic personalities often develop; in other words, people who experience such a trauma often have difficulty regulating their sense of self and their relationships with others.

Interpersonal therapy

INTERPERSONAL THERAPY: an approach that incorporates concepts and structure from cognitive-behavioral therapy and other intervention approaches

More recently, **INTERPERSONAL THERAPY** has emerged from psychoanalytic theories. This time-limited approach also incorporates concepts and structure from cognitive-behavioral therapy and other intervention approaches. It is commonly used with people experiencing depression.

Contributions and limitations of psychoanalytic theory

Contributions of psychoanalytic theory include:

- This theory is the basis for all subsequent psychological theories involved in the explanation of human behavior because it was the first theory.

- The approach provides a framework for exploring an individual's history and his or her relationship to the present by way of the unconscious.

- The concept of resolving resistance to the change process is a key aspect of the success of the therapeutic process.

- Many of the techniques of the therapy can be applied to other therapeutic models, including the development of interpersonal therapy.

Limitations of the theory include:

- For people utilizing traditional psychoanalytic therapy, a prolonged therapist training period is required. Furthermore, work with clients also tends to be long term.

- The importance of action to alleviate the problem is not recognized.

- The basic concepts of the theory are not verifiable by empirical research.

- The theory is based on neurotic rather than healthy personalities.

- The theory cannot be used in crisis counseling when immediate solutions are needed.

- Traditional psychoanalytic theory does not take into account social, cultural, and interpersonal variables, although some of the derivate schools of thought in psychodynamic theory do.

Key terms in psychoanalytic and psychodynamic therapy

- Abreaction: The emotional reliving of past painful experiences.

- Anxiety: The result of repressing threatening thoughts or feelings.

- Borderline Personality Disorder: The pathology that develops when an individual fails to adequately develop in the separation–individuation phase, characterized by instability, irritability, self-destruction, impulsive anger, and extreme mood shifts.

- Compensation: An ego-defense mechanism that helps develop positive traits to make up for individual limitations.

- Countertransference: A reaction toward the client by the therapist that can interfere with objectivity. It is generally related to the unmet and some-times unconscious needs of the therapist.

- Denial: The distortion of reality in an attempt to avoid dealing with a particular situation.

- Displacement: The tendency to direct one's energy toward another person or object in order to reduce one's own anxiety.

A structural overview of the various concepts and schools of thought in psychoanalytic and psychodynamic theory can be found at:

www.en.wikipedia.org /wiki/psychoanalysis

- **Ego:** The part of the personality that mediates between the unconscious instincts and the environment.

- **Ego-Defense Mechanism:** The unconscious process that operates to protect the individual from threatening and anxiety-producing thoughts, feelings, and impulses. Examples include displacement, denial, repression, and rationalization.

- **Ego Psychology:** A theory of ego development reflecting different stages of life; formulated by Heinz Hartmann, Erik Erikson, and other theorists.

- **Electra Complex:** The unconscious sexual feelings of a daughter toward her father, coupled with hostility toward her mother.

- **Free Association:** The technique of permitting the client to say whatever comes to mind without censoring.

- **Fixation:** The process of getting stuck at a particular stage of psychosexual development.

- **Id:** The part of the personality that is ruled by the pleasure principle; the center of the instincts, which are largely unconscious.

- **Interpretation:** A technique of the therapist to explain a particular event or behavior.

- **Interjection:** An ego-defense mechanism in which the client takes on behavior learned from another.

- **Libido:** The energy of all life instincts, including sexual energy.

- **Narcissistic Personality Disorder:** A personality disorder characterized by extreme self-love, an exaggerated sense of self-importance, and an explosive attitude toward others; these attitudes usually hide a poor self-concept.

- **Object Relations:** The theory that describes the interactional system of self and other; this theory is strongly based in developmental concepts.

- **Oedipus Complex:** The unconscious sexual feelings of a son toward his mother, coupled with hostility toward his father.

- **Projection:** The tendency on the part of the client to attribute to others qualities that are unacceptable in his or her own personality.

- **Psychic Energy:** The drive that propels a person's behavior and psychological functioning.

- **Rationalization:** The method of explaining failures or negative occurrences.

- Reaction Formation: An ego-defense mechanism in which a client strives to hide a socially unacceptable thought or feeling with behavior that is considered appropriate.

- Regression: An ego-defense mechanism of reverting to a less mature stage of development.

- Repression: The unconscious act of pushing unacceptable or painful experiences into the unconscious.

- Resistance: The client's unwillingness to share feelings and thoughts, or to make changes, in order for the psychoanalytic process to be successful.

- Sublimation: The process of redirecting sexual and other biological energies into socially acceptable and creative avenues.

- Superego: The part of the personality that determines what is right and wrong and strives to "be good."

- Symbiosis: A relationship between two individuals that is advantageous or necessary to both; if an individual does not progress beyond this stage, borderline personality disorder can develop.

- Transference: The fostering of emotions originally experienced toward one individual upon another individual not connected with the original experience (usually the therapist).

- Working Through: The process of exploring unconscious material, ego defenses, transference, and resistance.

Erikson's Psychosocial Theory of Human Development

Erik Erikson built on Freud's work and developed what is referred to as **PSYCHOSOCIAL THEORY**. It focuses on developmental tasks in relation to self and others. The eight stages of life articulated in this theory are:

PSYCHOSOCIAL THEORY: focuses on developmental tasks in relation to self and others

1. Basic Trust vs. Basic Mistrust (Birth to approximately 18 months of age): The infant's needs for nourishment and care are satisfied. The response to these needs must be consistent so that the infant develops a sense of trust and attachment to one or two adults. Mistrust results if the infant's needs are not met.

2. Autonomy vs. Shame and Doubt (18 to 30 months of age): The child develops an early sense of independence and a measure of some control over the environment. This independence is manifested by self-feeding, dressing, toileting, etc. In this stage the child needs reassurance and support from the adults around him or her. Overprotection should be avoided.

3. Initiative vs. Guilt ($2\frac{1}{2}$ to 5 years of age): The child develops an imagination and enjoys playacting adult roles. The child is also learning to perform adult roles and begins to realize restraints are necessary. A pervasive sense of guilt occurs if the child is not successful in initiating everyday activities and tasks.

4. Industry vs. Inferiority (Elementary and middle school years): The child becomes curious, with the need to explore and manipulate the environment around her or him. Competency is reached through accomplishments. The child becomes increasingly aware of interactions with others in the school and neighborhood. If a sense of adequacy is not acquired during this stage, feelings of inferiority occur.

5. Identity vs. Role Confusion (Adolescence): The child is striving for an identity and sense of self-worth. Adolescents seek to formulate their own values, beliefs, and lifestyle. They experiment with different lifestyles. If previous stages have not been resolved satisfactorily, the tasks may reoccur here as developmental problems. Resolving unfinished business is one of the major tasks of adolescence.

6. Intimacy vs. Isolation: This struggle occurs during young adulthood. The adult becomes willing to be open about self and to commit to a close personal relationship.

7. Generativity vs. Stagnation: Maturity is achieved. The task here is to establish and guide the next generation and come to terms with one's dreams and accomplishments.

8. Ego Integrity vs. Despair: This stage occurs during later life. The elderly may experience despair if ego integrity is not obtained. When successful, people have a sense of fulfillment about their lives.

Adlerian Theory

Alfred Adler was originally a follower of Freud. Subsequent Adlerians include Rudolf Dreikers and Harold Mosak. Rudolf Dreikers was instrumental in applying Adlerian principles to group work. Whereas Freud explored the psychosexual aspects of personality, Adler concentrated on the psychosocial aspects of human nature. He believed that people are in control of their lives, thus creating an individual lifestyle at an early age.

Adler called his approach individual psychology. In contrast to Freud, Adler felt that consciousness rather than unconsciousness was the core of personality

theory. He did not believe in reliving childhood experiences, but rather in using early recollections as clues to understanding the lifestyle of the individual.

Adler emphasized the positive abilities of the individual as influenced by societal forces and the capacity of each individual to reach optimal development. His theory became the basis for the ensuing humanistic theories that abound today. The main goal of these theories is confronting basic mistakes and assumptions the client has made and attempting to redirect them. The focus is on examining the beliefs of the client as expressed by his or her behavior.

Some key concepts in Adler's theory are:

- Childhood experiences themselves are not as crucial as the attitude toward those experiences

- All people have unique lifestyles, none of which are the same

- One's lifestyle is set by age 5 and is a reaction to perceived inferiority

- One's lifestyle is learned from early family interactions

- Behavior is motivated by social needs and has a goal-oriented direction

Contributions and limitations of Adlerian theory

Contributions of Adler's theory include:

- The theory was a major impetus for the development of other humanistic theories.

- The theory has influenced cognitive-behavioral theories, family therapies, and general mental health work. Currently, it is having an impact on emerging theories of culturally competent counseling.

Limitations of the theory include:

- An inability to validate the vaguely defined concepts with empirical data

- The oversimplification of complex human functioning

- It is based too heavily on a common sense perspective

Key terms in Adlerian theory

- **Avoiding Traps:** The therapist's efforts to avoid reinforcing clients' destructive behavior patterns

- **Basic Mistakes:** Self-defeating beliefs (such as an extreme need for security, unattainable goals, and doubting one's worth) that influence the formation of one's personality

> *Adler emphasized the positive abilities of the individual as influenced by societal forces and the capacity of each individual to reach optimal development.*

COUNSELING AND GUIDANCE

- Catching Oneself: The client's process of becoming more aware of self-destructive behavior, irrational thoughts, and anticipating events before they happen
- Convictions: The results of life experiences
- Courage: The ability to take risks
- Encouragement: The process used in therapy to help clients reach realistic goals by using all their resources, recognizing their positive traits, and transforming negative traits into positive assets
- Family Constellations: "Pictures" of family dynamics and relationships
- Fictional Finalism: The ideal image one sees oneself becoming; one's ultimate goal
- Holism: The perception of one's personality as a whole
- Immediacy: Dealing with the present moment in the counseling process
- Individual Psychology: The uniqueness and unity of the individual
- Individuality: The way everyone develops his or her own style of striving for competence
- Inferiority Feelings: The negative feeling one has about oneself; these feelings can be both real and imagined
- Life Tasks: The life work of all humans to attain a satisfying lifestyle
- Lifestyle: The way in which one perceives life and upon which the personality is formed
- Motivational Modification: The therapist's interest in helping clients to want to change their negative lifestyle goals and challenging their basic negative concepts
- Paradoxical Intention: The technique characterized by helping the client invoke exaggerated debilitating thoughts and behaviors and accept and conquer his or her resistance, thus becoming more aware of his or her behavior and accepting responsibility for the consequences of that behavior
- Phenomenological Orientation: The technique the therapist uses that attempts to view the world from the client's point of view
- Priorities: A coping method used to obtain satisfaction in life; by pointing out a client's priorities, the therapist hopes to help the client realize the feelings invoked in others and the price the client pays by clinging to these negative priorities

- Private Logic: The central psychological framework of the client; the philosophy upon which one bases one's lifestyle, including basic mistakes and faulty assumptions that often do not conform to reality

- Push-Button: A technique that teaches the client that he or she can control his or her thoughts and feelings

- Social Interest: The attitude a client has regarding society; a sense of empathy and identification with the larger community

- Spitting in the Client's Soup: A technique that reduces the usefulness of a client's manipulative behavior; by pointing out the manipulation, the therapist effectively defeats the client's anticipated results of the manipulation

- Striving for Superiority: The desire to become competent and perfect; also known as the growth force

- Task Setting and Commitment: The technique taught to the client to formulate realistic, attainable goals that can be revised if necessary

Behaviorism

The behavioral theories of psychological development and therapy that developed in the 1950s and 1960s were a radical protest of the psychoanalytic theories that had held sway for many years. The key figures in behaviorism were Arnold Lazarus, Albert Bandura, Joseph Wolpe, and Alan Kazdin. They built on the work of learning theorists (*see Skill 1.3*). Contemporary **BEHAVIOR THERAPY** utilizes many concepts, research methods, and treatments to account for and change behavior. In contrast to the psychoanalytic theories, behavior therapies are focused on current behavior as well as methods to change self-destructive behaviors.

The main goal of behavior therapy is to eliminate negative learned behaviors or self-defeating behaviors by having the client learn new, more effective and positive ways of dealing with situations that create behavior problems. The client and the therapist work together to formulate goals. In this process, they detail specific methods to address the client's self-defeating behavior. The client must have a sense of ownership regarding the goals in order to make them work.

The job of the therapist in behavior therapy is to:

- Make the problem clear

- Verbalize the consequences of the behavior manifested by the client

- Serve as a role model for the client

BEHAVIOR THERAPY: a theory that is focused on current behavior as well as methods to change self-destructive behaviors

Behavior theory describes the principles of learned behavior.

- Help formulate alternative courses of action with possible consequences

- Advocate behavior change and provide reinforcement to the client when the behavior changes

There should be an objective assessment of the results of the therapy. The job of the client is to help the therapist explore the alternatives to the problematic behavior, be open to trying new strategies, and be willing to take the risk of trying these new strategies outside the therapeutic session.

Although the goals of the therapy are specific and concrete, and the problems are defined, the procedures and techniques of the therapy are contingent on the needs of each client. Therefore no set of specific techniques is used, although some methods are used more often than others. Some of these methods are relaxation, systematic desensitization, reinforcement, modeling, assertiveness training, multimodal therapy, and self-management programs.

Therapy should focus on behavior change, not attitude change, and actions are expected to follow verbalization (in other words, practice in real life).

Contributions and limitations of behaviorism

Contributions of behavior theory and therapy include:

- The techniques are based on empirical research. Any technique that is not effective empirically is discarded.

- Treatment is based on the assessment of individual needs.

- The therapy is effective in the short term, yielding results that can be widely applied.

- The approaches can be used with culturally diverse client populations because of the emphasis on teaching the client about the process and the structure of the therapy.

Limitations of behavior theory and therapy include:

- Success depends on the ability to control environmental factors.

- In institutional settings, there is a danger of imposing conformity at the expense of individual needs.

- The therapy does not address philosophical human problems such as values and identity issues.

- The therapist may sometimes direct a client toward the goals of the therapist instead of the goals of the client. This may occur, in particular, when the therapist does not agree with the client's value system.

- Past history is not an important factor in the therapy, therefore the assumption is that past experiences and childhood traumatic events do not play a role in present behaviors.

Key terms in behaviorism

- **Assertiveness Training:** Teaching skills and techniques for dealing with difficult situations in ways that are direct, firm, and clear. Assertiveness training often challenges beliefs that accompany a lack of assertiveness and employs the technique of rehearsal.

- **Basic ID:** An acronym for the seven major areas of personality functioning: behavior, affect, sensations, imagery, cognition, interpersonal and drugs/biology. (Lazarus, 1981).

- **Behavior Rehearsal:** A technique of trying out new behavioral approaches that can be used in real-life situations.

- **Coaching:** Providing clients with general principles of how to make effective behavioral changes.

- **Cognitive Restructuring:** The process of identifying and understanding the impact of negative behavior and thoughts, as well as learning to replace them with more realistic and appropriate actions and beliefs.

- **Contingency Contracting:** The specific delineation of behavior to be performed, changed, or discontinued, along with the rewards for the performance of these contractual items, the conditions under which these rewards are to be received, and the time limit involved.

- **Counterconditioning:** The process of retraining problem behaviors and introducing new behaviors.

- **Feedback:** The process of providing the client with verbal responses to behavior changes. The two parts of feedback are encouragement and praise for attempting the behavior change, and specific suggestions for making the behavior change work better.

- **Modeling:** The process of showing new ways to do something. The therapist can help the client do this by role-playing the type of behavior that is desired. Albert Bandura has done much of the work in this area.

- **Multimodal Therapy:** The process the therapist evokes in making an evaluation of the client's level of functioning at the beginning of the therapy and subsequently adjusting procedures and techniques to the goals of the client. The behavior change is a function of techniques, strategies, and modeling. Arnold Lazarus developed this type of therapy.

- **Negative Reinforcement:** When the removal of an aversive stimulus is likely to increase a problem behavior.

- **Operant Conditioning:** A concept from B. F. Skinner (a learning theorist) that says behaviors of an active organism are controlled and controllable, even without actual consequences each time.

- Positive Reinforcement: A conditioning technique in which an individual receives a desirable result for a positive behavior that subsequently increases the probability of that behavior reoccurring.

- Progressive Relaxation: A technique employed to increase the ability of the client to control his or her stress level by gradually having the client relax.

- Reinforcement: A specific response to a behavior that increases the probability of that behavior being repeated.

- Self-Instructional Training/Management: Strategies used to teach coping skills in problem situations such as anxiety, depression, and pain. Realistic goals are set and constantly evaluated. The consistent use of a particular strategy is essential, and support systems are important, as is the use of self-reinforcement in order to achieve success.

- Self-Monitoring: The process of observing one's behavior patterns and interactions in social situations.

- Social Learning Theory: A theory originated by Alfred Bandura, which holds that behavior is understood by taking into consideration the social conditions under which learning occurs as well as individual psychological factors.

- Systematic Desensitization: The process of teaching a client to become less sensitized to a particular stimulus, thereby reducing anxiety. The techniques consist of relaxation exercises combined with an imagined series of progressively more anxiety-producing situations. It was developed by Joseph Wolpe and is based on the principles of classical conditioning.

- Technical Eclecticism: The process of using different techniques from different therapies to achieve behavior change; the result is flexibility in the therapeutic process.

> ### SKILL 1.2 Basic Milestones in Physical, Motor, and Language Development

The majority of changes in physical and motor growth and the development of language occur prior to age 5. The primary exception to this is the transition from preadolescence (approximately ages 9–12) into puberty. Hormonal shifts and ongoing physical growth become acute at preadolescence and bring children into adolescence and physical maturity.

Language development in elementary school proceeds primarily in terms of the development of vocabulary and increased sophistication in the use of words and concepts.

The key physical and motor developmental milestones for school-age children and adolescents are noted below.

Ages 6–8

- Growth slows but remains steady

- Body proportions change, with legs getting longer

- Body fat percentage decreases and more muscle develops, with an increase in overall strength

- Fine motor skills are enhanced, though muscle coordination is still uneven; this results in the ability to write in cursive in addition to the ability to print

- Permanent teeth come in, sometimes causing crowding if the mouth has not developed enough

Ages 9–12

- Significant body changes as puberty approaches: weight gain, pubic and body hair, increased sweating, oily skin, genital development

- May experience joint pain as a result of growth spurts

- Girls generally develop sooner; hips widen, breasts start to emerge, menstruation begins

- Boys enter preadolescence later and growth changes last longer

Ages 13–17

- Puberty is reached; the adolescent is physically mature

- Girls reach their adult height by age 17; boys continue to add height into their 20s

The following Web sites provide detailed information about developmental milestones and changes:

www.ces.ncsu.edu/depts /fcs/human.html

www.littleab.com/ABcare /development.html

www.education.com /reference/ontrack/

For an interesting description of various theories and models related to learning, see:

www.learning-theories.com

Theories about learning are varied. Behaviorism (*see Skill 1.1*) describes much about how individuals learn, and many of the concepts of behaviorism are central to learning and cognitive development. The theorists in this area of study include the functionalists, the associationists, and the cognitive developmentalists.

The study of consciousness in the context of the environment, instead of as an isolated element, was the main contribution of functionalist theorists Edward Thorndike, B. F. Skinner, John G. Watson, and C. L. Hull to learning theory. They opposed the introspective techniques of psychoanalytic approaches because they did not explore the relationship with other elements in an individual's environment. The functionalists insisted that mental function be studied in relation to the world surrounding the individual. Many of the ideas in behaviorism developed from this work.

Associationist theorists Ivan Pavlov and William Estes believed that experience or recall of one object builds upon and causes the recall of other objects related to or associated with that object. This idea is based on the theories of Aristotle. The key concept is that living organisms' responses to environmental stimuli are governed by the sensory, response, and central nervous systems, which consist of innate circuitry and memories of past experiences. The response of organisms is therefore dependent upon associating past memories with present stimuli. This theory applied to learning explains how infants expand their sphere of knowledge.

Cognitive theorists Jean Piaget, Edward Tolman, Albert Bandura, and Donald Norman assign a prominent role to mental processes. The process of learning depends on information received and the processing of that information, which in turn depends on mental processes, past experiences or behaviors, and present environmental factors. The person, the environment, and behavior are interdependent. Faulty cognitive processes develop from inaccurate perceptions, overgeneralization, or incomplete or erroneous information.

Piaget

In Piaget's view, development is defined as the adaptive, orderly changes experienced by the human organism from birth to death.

Jean Piaget focused on cognition from a developmental perspective. The child grows cognitively, socially, physically, and morally, gradually and at different rates. These four different types of growth and development have an impact on the learning process and the behavior patterns of the child.