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10

Thinking and Errors of Thinking



LEARNING OBJECTIVES

After the completion of the chapter, the readers will be able to:

- Learn the concept of thinking by explaining that thinking is the mental process you use to solve problems, make decisions, and understand the world around you.
- Emphasize that thinking involves using your brain to analyze, reason, and come up with solutions to various challenges.
- Discuss that in this scenario, you would likely engage in thinking processes.
- Mention that these thinking processes are essential not only in everyday life but also in various professions, including nursing, where critical thinking and problem-solving are vital skills.

CHAPTER OUTLINE

- Introduction Sing Know
- Meaning
- Definitions Ar
- Nature of Thinking
- Factors Influencing Thinking
- Characteristics of Thinking
- Types of Thinking
- Levels of Thinking
- Cognitive Process in Thinking
- Theories of Thinking

- Disorders Associated with Thinking
- Cognitive Biases and Errors in Thinking
- Reasoning
- Problem-Solving and Decision-Making
 - Role of a Nurse in Enhancing Thinking

KEY TERMS

Availability heuristic: The tendency to overestimate the likelihood of events based on their availability in memory.

Concept: The ability to analyze, evaluate, and synthesize information, making reasoned judgments and decisions.

Confirmation bias: The tendency to search for, interpret, favor, and recall information in a way that confirms one's preexisting beliefs or hypotheses.

Heuristic: Mental shortcuts or rules of thumb used to simplify decision-making and problem-solving.

Mental models: Internal representations of the external world that help people to interact with that world.

Metacognition: Thinking about one's own thinking processes. It involves self-awareness and the ability to monitor, regulate, and evaluate cognitive activities. **Syllogism:** A kind of logical argument that applies deductive reasoning to arrive at a conclusion based on two propositions that are asserted or assumed to be true.

INTRODUCTION

Case Scenario

The Lost Keys

Imagine you are getting ready for an important day at school or work. You are in a hurry because you are running late. As you are about to leave, you realize you cannot find your keys anywhere. You search your room, the living room, and even the kitchen, but they seem to have vanished.

Key Questions

- 1. What would you do in this situation?
- 2. How would you approach the problem of finding your lost keys?
- 3. What kind of thinking processes would you use to solve this everyday problem?

Thinking is a cognitive process that involves the generation, evaluation, and application of ideas. It is a complex process that involves many different mental processes, such as perception, memory, reasoning, and problem-solving. Thinking allows us to make sense of the world around us, to plan for the future, and to solve problems.

MEANING

Thinking is the mental activity that allows us to process information, reason, plan, and make sense of the world around us. It is the cognitive engine that powers our everyday activities. To illustrate, let's consider a scenario Imagine your author Monika who love rain she wakes up to a rainy morning, and you need to decide whether to carry an umbrella. **Your thought process** involves assessing the weather (checked the weather forecast it predicted heavy rain), considering your plans for the day (entire day she must be outside like going for job, collecting groceries and returning to home), and deciding whether to take the umbrella or not

(so it is better that I take umbrella with me since it can rain any time and *I* might be outside).

DEFINITIONS

Thinking is the mental process of organizing and interpreting information to understand the world. —Piaget

Thinking is a social process that is mediated by language and culture.

Thinking is a process of constructing and testing mental models of the world. -Bruner

NATURE OF THINKING

Thinking is a complex mental activity involving the processing of information, problem-solving, decision-making, and memory retrieval. It encompasses both conscious and unconscious thought, often facilitated by language and symbols. Thinking is crucial for adapting to challenges, making choices, and generating creative solutions. It varies among individuals and develops throughout life, influenced by cultural, social, and cognitive factors. Understanding the nature of thinking is essential for psychology and cognitive science, as it sheds light on how humans perceive, learn, and interact with their environment.

FACTORS INFLUENCING THINKING

There are many factors that can influence thinking, including:

- Intelligence: Intelligence is the ability to learn, understand, and solve problems. It is a major factor in determining the quality of our thinking.
- Knowledge: Knowledge is the information that we have about the world. The more knowledge we have, the better we can think.
- Experience: Experience is the knowledge that we gain from our interactions with the world. The more experience we have, the better we can think.
- **Motivation:** Motivation is the desire to achieve a goal. Motivation can help us to focus on thinking and to persist in the face of challenges.
- Emotion: Emotion can influence our thinking in both positive and negative ways. Positive emotions, such as happiness and excitement, can help us to think more creatively and flexibly. Negative emotions, such as anger and sadness, can make it difficult to think clearly.

CHARACTERISTICS OF THINKING

The characteristics of thinking are as follows:

- **Cognitive:** It is a cognitive process. Thinking is a mental process that involves the manipulation of information.
- **Goal-directed:** It is a goal-directed process. Thinking is often directed toward a goal, such as solving a problem or deciding.
- Complex: It is a complex process. Thinking involves many different mental processes, such as perception, memory, reasoning, and problem-solving.
- **Flexible:** It is a flexible process. Thinking can be adapted to different situations and problems.
- **Social:** It is a social process. Thinking is often influenced by our interactions with others.

TYPES OF THINKING

Thinking is a complex cognitive process, and there are various types of thinking that individuals engage in. Here are some common types of thinking:

- Critical thinking: Critical thinking involves analyzing, evaluating, and making reasoned judgments about information or arguments. It is a systematic and logical approach to problem-solving and decisionmaking.
- 2. **Creative thinking:** Creative thinking involves generating innovative ideas, solutions, and insights. It often requires breaking away from traditional thought patterns and thinking "outside the box".
- 3. **Analytical thinking:** Analytical thinking is the process of breaking down complex problems or information into smaller, manageable components to better understand them and find solutions.
- 4. **Divergent thinking:** Divergent thinking is associated with creativity and involves generating a wide range of possible solutions or ideas. It encourages exploring multiple perspectives and possibilities.
- 5. Convergent thinking: Convergent thinking is the opposite of divergent thinking. It focuses on finding the single best solution or answer to a problem, typically by narrowing down options and applying logical reasoning.
- 6. **Holistic thinking:** Holistic thinking involves considering the bigger picture and understanding how various elements are interconnected. It emphasizes the integration of different perspectives and factors.

- 7. **Strategic thinking:** Strategic thinking involves planning and making decisions with a long-term view. It often requires considering potential consequences and setting goals to achieve desired outcomes.
- 8. Systems thinking: Systems thinking involves examining complex systems, understanding their components and interactions, and identifying how changes in one part can affect the entire system.
- 9. **Metacognition:** Metacognition is thinking about thinking. It involves self-awareness and self-reflection on one's thought processes, strategies, and cognitive abilities.
- 10. Critical reflection: Critical reflection is a deeper form of thinking that involves examining one's beliefs, values, and experiences to gain insight and understanding. It is often used in personal growth and learning contexts.
- 11. Design thinking: Design thinking is a problem-solving approach that focuses on empathizing with users, defining problems, ideating solutions, prototyping, and testing. It is commonly used in product and service design.
- 12. Emotional intelligence: Emotional intelligence involves recognizing, understanding, and managing one's own emotions and the emotions of others. It plays a significant role in interpersonal relationships and decision-making.

LEVELS OF THINKING

Thinking can be categorized into different levels or stages, each building upon the previous one. These levels of thinking represent a progression from basic perception to more complex cognitive processes like problem-solving and creativity. Individuals often move between these levels depending on the task or situation, and higher-level thinking often requires a solid foundation in lower-level thinking skills.

- Perception: Perception is the first level of thinking, where you become aware of sensory information from your environment. It involves using your five senses (sight, hearing, taste, touch, and smell) to gather data.
- **Observation:** After perceiving sensory information, the next step is observation. This involves paying closer attention to specific details or patterns in what you have perceived. Observation is a more focused form of thinking.
- Recognition: Recognition occurs when you identify and label the information you have observed. For example, if you see an animal with four legs and a tail, you recognize it as a dog.

- Comprehension goes beyond recognition. Comprehension: It involves understanding the meaning and significance of the recognized information. You grasp the concepts, connections, and implications involved.
- **Analysis:** Analysis is a higher-level thinking skill. It involves breaking down complex information into its component parts or examining the relationships between different elements. This helps you understand the structure and organization of the information.
- **Synthesis:** Synthesis is the opposite of analysis. It involves combining separate elements or ideas to create a new whole. It is about generating novel solutions or insights by integrating existing knowledge.
- **Evaluation:** Evaluation involves making judgments or assessments about the quality, value or significance of information, ideas or solutions. It requires considering criteria and making informed decisions.
- Critical thinking: Critical thinking is a more advanced form of evaluation. It involves systematically and objectively assessing information or arguments, considering multiple perspectives, and making well-reasoned judgments or conclusions.
- **Problem-solving:** Problem-solving is the practical application of critical thinking and other thinking skills to address specific challenges or issues. It involves defining a problem, generating solutions, and implementing a chosen solution.
- Creativity: Creativity is a high-level cognitive skill that involves generating original ideas, solutions or products. It often requires thinking outside traditional boundaries and embracing novelty and innovation.
- Metacognition: Metacognition is thinking about thinking. It is the ability to reflect on your own thought processes, monitor your thinking, and adjust as needed to improve your cognitive abilities.

Levels Based on Bloom's Taxonomy

Bloom's taxonomy, originally introduced by **Benjamin Bloom** in 1956, is a framework for categorizing educational goals into a hierarchy of cognitive complexity. This model outlines six levels of thinking processes, arranged from the simplest to the most complex: Knowledge, comprehension, application, analysis, synthesis, and evaluation. The structure is hierarchical, meaning that mastery of a lower level is essential before moving on to the higher levels. Essentially, Bloom's model encourages educators to foster deeper levels of understanding and critical thinking in students, guiding them from basic knowledge recall to the ability to evaluate and create new ideas based on what they have learned.

Original Bloom's Taxonomy (1956)

- Knowledge: Recalling data, facts, basic concepts, and answers.
- Comprehension: Grasping the meaning of informational material, utilizing it effectively, and interpreting messages.
- Application: Using acquired knowledge in new situations, applying concepts and rules in different ways.
- Analysis: Examining and breaking information into parts by identifying motives or causes; making inferences and finding evidence to support generalizations.
- **Synthesis:** Compiling information in a different way by combining elements in a new pattern or proposing alternative solutions.
- **Evaluation:** Judging the value of materials or methods as they apply to a particular situation, using certain criteria or standards.

Revised Bloom's Taxonomy (2001)

The update to Bloom's taxonomy led by Lorin Anderson, a student of Bloom, aimed to modernize the taxonomy for the 21st century, incorporating insights from cognitive psychologists, curriculum experts, and assessment specialists. This revision resulted in noticeable changes, especially in the terms used to classify cognitive complexity levels. The modifications primarily involved converting the six main categories from nouns to more dynamic verb forms to emphasize the active learning process. Here is a concise overview of these terminological updates from the original to the Revised Bloom's Taxonomy (RBT). Both, original and revised Bloom's taxonomy are given in Figure 10.1.

- 1. Remembering: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
- 2. Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
- 3. **Applying:** Carrying out or using a procedure in a given situation; applying what has been learned to new scenarios.
- 4. **Analyzing:** Breaking information into parts to explore understandings and relationships; examining information to identify motives or causes.

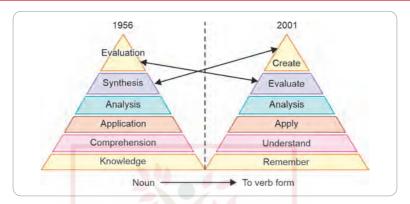


Figure 10.1: Original and revised Bloom's taxonomy

- 5. **Evaluating:** Making judgments based on criteria and standards; reviewing and critiquing the information.
- 6. **Creating:** Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure.

These changes underscore a more dynamic view of learning, focusing on the process of engaging with and utilizing knowledge rather than simply acquiring and recalling information. The shift from nouns to verbs in the taxonomy, aims to better reflect the complexities and active nature of learning processes in contemporary educational settings.

COGNITIVE PROCESS IN THINKING

Cognitive processes are the mental activities and functions that occur when we engage in thinking, problem-solving, and decision-making. These processes play a crucial role in how we process information, understand the world, and make sense of our experiences (Fig. 10.2).

Box 1

- Visualization: Visualization is the ability to create mental images or representations of objects, ideas or concepts. It can enhance understanding and problem-solving by allowing us to "see" complex information.
- Pattern recognition: Pattern recognition involves identifying recurring patterns or relationships within data or information. It helps us make connections and draw conclusions based on similarities or trends.

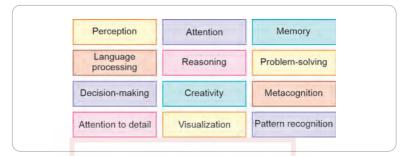


Figure 10.2: Cognitive processes involved in thinking

These cognitive processes are not mutually exclusive and often work together as we engage in thinking and problem-solving. Effective thinking often requires a combination of these processes to process information, make decisions, and solve complex problems.

THEORIES OF THINKING

Thinking is vast area; majorly few of the cognitive theories which associate with thinking will fall under thinking category, are given as follows:

Piaget's Theory of Cognitive Development

Piaget's theory of cognitive development proposes that thinking develops through a series of stages.

Note: Both theories are already explained in Chapter 4: Developmental Psychology.

Stages of Cognitive Development

These stages are shown in Table 10.1.

TABLE 10.1: Piaget's cognitive development stages

Stages	Stages of development (years)
1.	Sensorimotor stage (birth to 2 years)
2.	Preoperational stage (2–7 years)
3.	Concrete operational stage (7–11 years)
4.	Formal operational stage (11 years and up)

Vygotsky's Theory of Social Development

Vygotsky's theory of social development proposes that thinking is a social process that is mediated by language and culture (details are given in Chapter 4: Developmental Psychology).

Jerome Bruner's Theory of Cognitive Development

Bruner's theory of cognitive development proposes that thinking is a process of constructing and testing mental models of the world. Bruner's theory emphasizes the role of culture and social interaction in cognitive development.

He proposed three modes of representation:

- 1. **Enactive representation:** Learning through action and physical manipulation.
- 2. **Iconic representation:** Learning through mental imagery and visualization.
- 3. **Symbolic representation:** Learning through language and symbols.

Bruner also introduced the concept of the "scaffolding," where a more knowledgeable person (usually an adult or peer) provides support and guidance to a learner, gradually reducing assistance as the learner becomes more competent.

He argued that learning should be an active process and that education should be tailored to the learner's current stage of development, promoting "spiral" learning where concepts are revisited and deepened over time.

DISORDERS ASSOCIATED WITH THINKING

Thinking of the individual can be impacted at various level of development formation, progression or development). Although sometime people come only with complaints of some thoughts related issues which is called thoughts errors but a single symptom doesn't make a disorder or diagnosis. Hence disturbances of the thought can be that part of the many disorders. Some of the disorders given below are commonly associated with or have symptoms of thoughts disorder.

• **Schizophrenia:** Schizophrenia is a mental disorder that affects thinking, perception, and behavior. People with schizophrenia may experience delusions (thought disorder), hallucinations, and disorganized speech, sometimes other symptoms like thought block, perseverance (not able to shift to other thought).

Box 2

In your upcoming years you will learn that each person might have same disease but with different symptoms or presentations specially in psychological disorders. For example, schizophrenia patients, some may experience flight of ideas, and paranoid thoughts but others may not. These examples (symptoms/disorder) occur in patients but are given here only for the purpose of making an understanding.

- Bipolar disorder: Bipolar disorder is a mental disorder that affects mood and thinking. People with bipolar disorder may experience periods of mania, depression, and hypomania.
- Depression: Depression is a mental disorder that affects mood and thinking. People with depression may experience sadness, hopelessness, and symptoms of thoughts retardation.
- **Anxiety:** Anxiety is a mental disorder that affects mood and thinking. People with anxiety may experience worry, fear, and panic attacks. Sometime anxiety among people will be provoke by a thought (negative).
- Obsessive-compulsive disorder: Obsessive-compulsive disorder is a mental disorder that affects thinking and behavior. People with obsessive-compulsive disorder may experience intrusive thoughts, compulsions, and rituals.
- **Psychosis:** People with this disorder generally have various disorders of thoughts like delusion, thought blocks, perseveration, flight of ideas, etc. An Initiative by CBS Nursing Division

COGNITIVE BIASES AND ERRORS IN THINKING

Understanding and mitigating cognitive biases is essential for clear and rational thinking. Here is a practical example—To counter confirmation bias, individuals can actively seek out information that challenges their beliefs, fostering a more balanced perspective.

Cognitive and Configuration Biases

- Cognitive biases are systematic errors in thinking that can lead to inaccurate judgments. Let us explore an example:
- Confirmation bias is a common cognitive bias where people tend to seek information that confirms their existing beliefs. Consider how this bias might impact someone's perception of a political candidate.

Errors in Thinking

- All-or-nothing thinking (black-and-white thinking): This distortion involves seeing things in extreme, polarized terms, with no middle ground. It is either all good or all bad, with no room for nuance.
- Catastrophizing: Catastrophizing is when you assume the worst possible outcome will occur, often blowing things out of proportion. This can lead to excessive anxiety and worry.
- Mind reading: This involves assuming you know what others are thinking or feeling without any evidence to support your assumptions. It can lead to misunderstandings and conflict.
- Fortune telling: Fortune telling is making predictions about the future, usually negative ones, without any concrete evidence. It can create unnecessary anxiety and fear.
- **Discounting the positive:** This distortion involves minimizing or ignoring positive events or accomplishments. People who discount the positive tend to focus solely on negative aspects of situations.
- Emotional reasoning: Emotional reasoning is when you believe your
 emotions are facts. For example, if you feel stupid, you assume you
 are stupid, even if there is no objective evidence to support that belief.
- Should statements: "Should" statements involve imposing unrealistic
 or unattainable expectations on yourself or others. They can lead to
 feelings of guilt, frustration, and inadequacy.
- Labeling and mislabeling: This distortion involves using negative labels to describe yourself or others based on specific behaviors or mistakes. It can lead to a negative self-image.
- **Personalization:** Personalization is when you blame yourself for events that are beyond your control. It involves taking responsibility for things that are not your fault.
- **Selective attention:** This occurs when you only focus on one aspect of a situation while ignoring other relevant information. It can lead to biased or incomplete judgments.
- Overgeneralization: Overgeneralization involves drawing broad, negative conclusions based on a single incident or piece of evidence. This can lead to pessimism and hopelessness.
- Comparisons: Constantly comparing yourself to others, especially in an unfavorable way, can lead to feelings of envy, inadequacy, and low self-esteem.

REASONING

Reasoning is a type of thinking that involves using evidence and logic to make decisions or to solve problems. There are many different types of reasoning, including:

- **Deductive reasoning:** Deductive reasoning is a type of reasoning that involves using general principles to make specific predictions. For example, if we know that all birds have feathers, we can deduce that a specific bird, such as a sparrow, has feathers.
- **Inductive reasoning:** Inductive reasoning is a type of reasoning that involves using specific observations to make general conclusions. For example, if we observe that a sparrow has feathers, we can induce that all birds have feathers.
- **Abductive reasoning:** Abductive reasoning is a type of reasoning that involves using evidence to make the best possible explanation for an observation. For example, if we observe that a sparrow has feathers, we can abduce that feathers are an adaptation that helps birds to fly.

PROBLEM-SOLVING AND DECISION-MAKING

Problem-solving is a critical thinking skill used to tackle challenges. There are several strategies, including trial and error, algorithms, and heuristics.

Example: Imagine you are solving a complex puzzle. Your approach might involve trying different pieces (trial and error) or following a step-by-step method (algorithm).

Problem-Solving Strategies

Here are key aspects of problem solving:

- 1. **Identification of a problem:** The first step in problem solving is recognizing that a problem exists. This involves perceiving a discrepancy between the current state (the problem) and the desired state (the solution or goal).
- 2. Definition and understanding/reasoning: Once a problem is identified, it needs to be clearly defined and understood. This includes gathering relevant information, specifying the problem's boundaries, and breaking it down into smaller, manageable parts.
- 3. Generation of solutions: Problem solving requires generating multiple potential solutions or strategies to address the problem. Creative thinking and brainstorming are often employed in this phase to explore various possibilities.

- 4. Evaluation of solutions: Each potential solution must be critically evaluated to determine its feasibility, effectiveness, and potential consequences. This evaluation involves assessing the pros and cons of each option.
- 5. Selection of the best solution/reasoning: After evaluating all possible solutions, the most appropriate and effective one is selected for implementation. The chosen solution aligns with the problem's specific context and objectives.
- 6. **Implementation:** The chosen solution is put into action. This may involve planning, organizing resources, and executing the selected strategy.
- 7. **Monitoring and adjustment:** Throughout the implementation process, it is crucial to monitor progress and make necessary adjustments. If unforeseen issues arise, problem solvers may need to adapt or modify their approach.
- 8. **Verification of results:** Once the solution has been implemented, it is essential to verify whether it has effectively addressed the problem. This may require further assessment and data analysis.
- 9. **Reflection and learning:** After solving a problem, it is valuable to reflect on the process and outcome. What worked well, and what could have been done differently? This reflection can inform future problem-solving efforts.
- 10. Iterative process: Problem solving is often an iterative process, as one solution may lead to new challenges or opportunities. Continuous problem solving and improvement are essential for growth and progress.

Decision-Making Process

Decision-making involves selecting the best course of action from multiple options (Fig. 10.3). It often requires a balance of rational thinking and emotions. Here is an example:

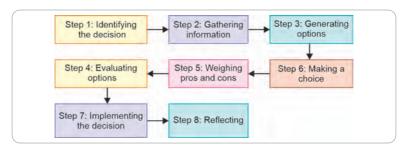


Figure 10.3: Process of decision making

Example: Picture yourself deciding between two job offers. You must weigh factors like salary, location, and company culture. Your decisionmaking process involves analyzing these aspects and considering your personal preferences.

Steps of Decision Making Process

Step 1: Identifying the decision

Recognize that you need to choose a college major that aligns with your interests, skills, and career goals.

Step 2: Gathering information

- Research the majors offered by the universities you have been accepted to.
- Seek advice from academic advisors, professors, and career counselors.
- Consider your personal interests, strengths, and long-term aspirations.

Step 3: Generating options

- Create a list of potential majors based on your research and interests.
- Explore the curriculum and career prospects for each major.
- Talk to students who are pursuing those majors to gain insights.

Step 4: Evaluating options

- Assess each potential major based on various criteria, such as your passion for the subject, job market demand, earning potential, and work-life balance.
- Consider the compatibility of the major with your values and lifestyle.

Step 5: Weighing pros and cons

- Create a list of pros and cons for each major you are considering.
- Assign relative importance to each criterion, as some factors may carry more weight in your decision.

Step 6: Making a choice

- After careful consideration and evaluation, choose the college major that best aligns with your interests and long-term goals.
- Understand that this decision may involve a mix of rational thinking (analyzing data and career prospects) and emotional factors (following your passion).

Step 7: Implementing the decision

- Complete the necessary steps to enrol in courses related to your chosen major.
- Inform your chosen university of your decision.

Step 8: Reflecting on the decision

- Periodically review your decision to ensure it still aligns with your goals and interests.
- Be open to adjustments if circumstances change or new opportunities arise.

In this example, the decision-making process involves a systematic approach to choosing a college major. It incorporates research, analysis, and consideration of both rational and emotional factors. The decision made will significantly impact the student's academic and career journey.

ROLE OF A NURSE IN ENHANCING THINKING

Nurses can play an important role in enhancing thinking in their patients. This can be done by:

- Providing education: Nurses can provide education about thinking skills, such as problem-solving, decision-making, and critical thinking.
- Encouraging patients to use their thinking skills: Nurses can encourage patients to use their thinking skills by asking them questions, providing opportunities for them to practice their skills, and giving them feedback.
- **Providing support:** Nurses can provide support to patients who are struggling with thinking problems. This can include providing emotional support.
- Role of nurse in enhancing thinking: Nurses can play an important role in enhancing thinking in their patients. This can be done by:
 - Providing education: Nurses can provide education about thinking skills, such as problem-solving, decision-making, and critical thinking.
 - Encouraging patients to use their thinking skills: Nurses can encourage patients to use their thinking skills by asking them questions, providing opportunities for them to practice their skills, and giving them feedback.
 - **Providing support:** Nurses can provide support to patients who are struggling with thinking problems. This can include providing emotional support, helping patients to develop coping mechanisms, and advocating for their needs.
 - Collaborating with other professionals: Nurses can collaborate with other professionals, such as doctors, psychologists, and social workers, to provide comprehensive care for patients with thinking problems.

Key Points

- Critical thinking: Critical thinking involves the objective analysis and evaluation of information to make reasoned judgments.
- Clinical reasoning: In healthcare, clinical reasoning is the process of using critical thinking to make clinical decisions. It includes steps like assessment, diagnosis, planning, implementation, and evaluation.
- Memory and recall: Memory is a fundamental cognitive process that plays a pivotal role in thinking. Your ability to remember and retrieve information impacts your thinking. Consider the following: Example: Think back to your last vacation. The ability to recall details about the destination, experiences, and people you met relies on your memory.
- Logical reasoning: Logical reasoning involves using structured and rational thought processes to draw conclusions. Example: Suppose you are presented with a series of mathematical equations. Logical reasoning enables you to follow the rules of arithmetic to arrive at the correct answers.
- Cognitive biases: Be aware of common cognitive biases, such as confirmation bias (favoring information that confirms existing beliefs) and availability heuristic (relying on readily available information), which can impact decision-making negatively.
- Evidence-based thinking: In healthcare and many other professions, decisions should be based on the best available evidence. This involves critically evaluating research and clinical data.
- Emotional intelligence: Recognize and manage emotions in decisionmaking. Emotions can both enhance and hinder thinking, so understanding their impact is vital.
- Reflective practice: Regularly reflect on your thinking processes and decisions. This helps you identify areas for improvement and refine your thinking skills.
- Collaborative thinking: In many fields, collaboration with others can lead to better outcomes. Be open to different perspectives and the value of teamwork in problem-solving.
- Time management: In decision-making and problem-solving, time management is crucial. Allocate sufficient time to gather information, analyze it, and make informed decisions.
- **Self-awareness:** Understand your own thinking strengths and weaknesses. Recognize when you need to seek input from others or take a break to refresh your thinking.
- Multidisciplinary thinking: In complex situations, consider multidisciplinary approach. Collaborating with experts from different fields can lead to innovative solutions.

Summary

- Thinking is a complex cognitive process that involves the generation, evaluation, and application of ideas.
- It is influenced by many factors, including intelligence, knowledge, experience, motivation, and emotion.
- There are many different types of thinking, including deductive reasoning, inductive reasoning, abductive reasoning, creative thinking, and critical thinking.
- Thinking has many different characteristics, including being a cognitive process, a goal-directed process, a complex process, a flexible process, and a social process.
- There are many different theories of thinking, including Piaget's theory
 of cognitive development, Vygotsky's theory of social development, and
 Bruner's theory of cognitive development.
- There are many different levels of thinking, including concrete thinking, abstract thinking, critical thinking, creative thinking, and metacognition.
- Reasoning is a type of thinking that involves using evidence and logic to make decisions or to solve problems.
- There are many disorders that can affect thinking, including schizophrenia, bipolar disorder, depression, anxiety, and obsessive-compulsive disorder.
- Nurses can play an important role in enhancing thinking in their patients by providing education, encouraging patients to use their thinking skills, providing support, and collaborating with other professionals.

Nursing Knowledge Tree



STUDENT ASSIGNMENT

LONG ANSWER QUESTIONS

- Explain the factors determining different levels of thinking in every individual.
- 2. Explain various kinds of thinking in detail. How do you think it is relevant to know types of thinking?

SHORT ANSWER QUESTIONS

- 1. Define "cognitive bias" and provide an example of how it can affect decision-making in a healthcare setting.
- 2. Write the significance of problem-solving skills in nursing practice and provide a brief description of the problem-solving process in healthcare.

MULTIPLE CHOICE QUESTIONS

1. Which of the following best describes critical thinking in psychology?

- a. The ability to memorize large amounts of information quickly.
- The process of evaluating and analyzing information to make reasoned decisions.
- c. The ability to read minds and predict behavior accurately.
- d. The skill of following established protocols without deviation.

Clinical reasoning in nursing typically involves which of the following steps?

- a. Only assessment and evaluation
- b. Assessment, diagnosis, planning, implementation, and evaluation
- c. Assessment, diagnosis, and treatment
- d. Assessment, prescription, and monitoring

3. Which of the following is not the part of decision making?

- a. Identifying the decision weighing the pros and cons
- b. Evaluating the options
- c. Being critical about each opinion
- d. All of the above

ANSWER KEY

1. b 2. b 3. c

Textbook of Applied Psychology for Nurses

Salient Features

- Practice-Oriented: Applies psychological concepts to real-world nursing scenarios, including communication, behavior, stress, and counseling.
- Holistic Approach: Integrates psychology, biology, and nursing to address both mental and physical health of patients.
- **Culturally Relevant:** Features Indian case studies, cultural insights, and traditional healing methods like yoga and meditation.
- Focused Chapters: Includes dedicated sections on psychological tests and counseling, highlighting their role in nursing interventions.

Learning Objectives given in the beginning of each chapter help readers understand the purpose of the chapter.

LEARNING OBJECTIVES

After the completion of the chapter, the readers will be able to:

- Understand the evolution of psychology
- Describe scope and branches of psychology.
 Know the relationship of psychology with other disciplines.

Chapter Outline gives a glimpse of the content covered in the chapter.

CHAPTER OUTLINE_

- Introduction
- Psychology: The Science of Human Behavior
- Definitions of Psychology
- Evolution of Psychology
- Scope of Psychology
 Branches of Psychology

Key Terms are added in each chapter to help understand the difficult scientific terms in easy language.

KEY TERMS

Behavior: Observable actions of human beings and animals.

Mind: The private inner experience of perceptions, thoughts, memories, and feelings.

Case Scenario demonstrates example(s) of specific clinical scenarios that are often encountered by Nurses.

Case Scenario

Stimulus and Sensation

Have you ever wondered how, within microseconds, your eyes blink when exposed to sunlight or bright light? Or how you can hear a distant car and recognize its type?

Numerous **Tables & Figures** are used to help students grasp the concepts quickly.

TABLE 5.1: Types of personality—summary

Types of Descriptio

Type A Perfectionist, impatient, competitive, work-obsessed, achievement-oriented, aggressive, stressed.

Type B Low stress, even-tempered, flexible.

Low stress, even-tempered, flexible, creative, adaptable to change, patient, tendency to procrastinate.



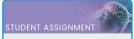
High Yield Points are covered to add extra value to students' knowledge.

High Yield Points

Some Interesting Memory Cues and Helpers

- Chunking: Grouping individual items into larger units to enhance memory capacity.
 Serial position effect: The tendency to remember
- Serial position effect: The tendency to remember items at the beginning (primacy) and end (recency) of a list better than those in the middle.

At the end of every chapter, **Student Assignment** section has been included to help the students assess their understanding of the discussed topics.



LONG ANSWER QUESTIONS

- Discuss the role of nature and nurture in the developmen of intelligence.
- 2. How can intelligence be improved?

SHORT ANSWER QUESTIONS

- What is the difference between fluid intelligence and crystallized intelligence?
- 2. What are some of the different ways to measure intelligence?

MULTIPLE CHOICE QUESTIONS

1. Which of the following is not a type of intelligence?

a. Emotional intelligence b. Social intelligence c. Practical intelligence d. Crystallized intelligence

About the Author



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