

A Taxonomic Approach on Learning Areas

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ABSTRACT

This study conceptualizes human beings as both bio-psycho and socio-cultural entities. It specifically emphasizes and evaluates Benjamin Bloom's taxonomy of cognitive, affective, and psychomotor learning domains based on the existing literature. Subsequent taxonomies, proposed after Bloom's, provide substantial benefits for planning and curriculum development aimed at enhancing student learning outcomes, which are as unique as their fingerprints. This theoretical evaluation is poised to make significant contributions, particularly by offering guidance to teachers.

Keywords: Affective learning domain, Bloom's taxonomy, cognitive learning domain, psychomotor learning domain.

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1. INTRODUCTION

It is recognized that the intellectual and behavioral development of children/students in basic education—encompassing grades 1 to 8—is revealed through their mental, emotional, and physical growth. This development occurs within the framework of the foundational realities of educational sciences. Skills and attitudes at each grade level are crucial as they determine the fundamental expectations and outcomes of education. A key challenge is establishing how these educational gains can be achieved based on objective and scientific criteria and managing this process effectively. Drawing from existential philosophy, which posits that children/students exist prior to their essence and strive to understand the essence of humanity through reason, it is essential for them to explore values, assets, and knowledge. One of the pivotal roles of teaching is to ensure that this exploration is guided systematically rather than left to chance. Philosophy, which intertwines ideas, attitudes, and skills, is integral to this inquiry. Assessing students' levels prior to education and determining their initial behavior are also critical. In this context, psychological counseling and guidance services play a vital role for all students. Teachers, by the nature of their profession, must gauge student achievement across all learning domains to promote higher success rates. The success targeted here encompasses acquiring knowledge, maturing comprehensively, and talent development. This concept can be further explained through the use of a behavioral taxonomy.

1.1. Taxonomy of Behaviors

The taxonomies proposed by Bloom (1984) and others represent a hierarchical ordering of intentional and desired behaviors, progressing from simple to complex, concrete to abstract, and easy to difficult within the knowledge characteristics framework, with each level serving as a prerequisite for the next. There is a similar principle of gradualism in knowledge in taxonomies, so there is no overlap or inclusion. According to cognitive learning theorists, behaviors acquired through learning are encoded in permanent memory. Research indicates that individuals acquire knowledge across three fundamental dimensions: cognitive, affective, and motor skills. Specifically, they acquire pure knowledge values, including principles, generalizations, and concepts from the cognitive dimension; attitudes forming the value system from the affective domain; and the knowledge of using body technology from the motor skills area (Alford et al., 2006). However, these classifications are not fixed; with advancements in educational and training technologies, new categories such as intuitiveness and sociality can be integrated. These domains interact continuously, influencing each other (Erden, 1991). In this sense, the dominant dimension plays a critical role in classifying behaviors (Erden, 1995). Acquired behaviors can be organized according to the same principles governing the sub-levels of their respective learning domains, ranging from simple to complex, concrete to abstract, and easy to difficult. Classifying behaviors using taxonomic approaches, as demonstrated by Ertürk (1982), is crucial for teachers' work. When

applied over an academic year, these approaches significantly facilitate teachers' efforts to elevate their students from lower to higher levels of success.

Therefore, it is advisable for teachers to utilize taxonomy in their teaching methods. This approach can also be used in citizenship education. One of the most important functions of education and training activities is to strengthen children's decision-making mechanisms and to ensure they have the will to make and implement healthy decisions using their own life experiences (Erden & Akman, 1997). The development of an independent entrepreneurial spirit also depends on this aspect. Consequently, our children, as decision-makers, will mature into individuals who can think independently, articulate their thoughts, and have the will to solve their problems. According to Anderson and Krathwohl (2001), behaviors are classified into three learning areas.

1.2. Different Taxonomy Examples

Various taxonomic approaches exist beyond the widely recognized Bloom's taxonomy (1984). For instance, Guilford (1988) conceptualized intelligence through three dimensions: content, operation (functional), and product. He gradually divided this classification into sub-stages within themselves. In terms of content, Guilford identified four sub-levels: auditory, muscular sensation, symbolic, and behavioral. The functional dimension in Guilford's framework can be considered cognitive operations and falls within the cognitive domain. He classified this dimension into several processes: knowledge, recall, divergent thinking, convergent thinking, and evaluation. According to Guilford's product dimension, it comprises classification, relations, system, translation, and consequences. Guilford's taxonomy is the most popular one (Guilford, 1982). This model focuses on the cognitive domain and structures communication in a gradual framework, encompassing stages such as perceiving, reproducing knowledge and products, and interpreting both convergent and divergent thinking.

In Taba's classification of the cognitive domain (Taba, 1962), three stages are mentioned: Stage I includes activities such as 'counting, listing, noticing, grouping, and labeling.' Stage II focuses on 'interpretation, inference, making, and generalizing,' with particular emphasis on 'explanation and interpretation.' Gerlach and Sullivan's (1967) taxonomy categorizes the cognitive domain into six stages: 'identifying, naming, describing, constructing, arranging, and showing.' Among these various approaches, Bloom's taxonomy is considered the most effective (Fidan & Erden, 1991).

1.3. Aim

The aim of this study is to deliver comprehensive insights into the three fundamental learning domains of human beings: cognitive, affective, and psychomotor learning areas, along with their respective sub-stages. By doing so, it seeks to facilitate the achievement of more effective and permanent learning outcomes within the information processing dimension of education, which operates as an open system for teachers. Thus, it is thought that this endeavor will enhance teachers' awareness and understanding of these critical concepts.

2. METHOD

This research is a theoretical and scanning model study. Concepts, principles, and generalizations identified at the operational level were tried to be explained within the framework of knowledge and experiences based on the literature. Subsequently, these identified principles, concepts, and generalizations were categorized and evaluated according to their learning domain. The study also aimed to formulate novel and original generalizations through this systematic review and categorization.

It is presumed that the studies, sources, and documents utilized in this research represent scientific information generated through rigorous scientific research methodologies and techniques. However, it is important to note that this research is bounded by the available resources and the responses provided by researchers to inquiries.

2.1. Research Problem/Question

The primary research question that this study aims to answer is as follows:

RQ₁: What are the main features and details of cognitive, affective, and psychomotor learning areas within the framework of taxonomic approaches?

- 1) *What are the features and details of the cognitive learning domain?*
- 2) *What are the features and details of the affective learning domain?*
- 3) *What are the features and details of the psychomotor learning domain?*

3. RESULTS

3.1. Bloom's Taxonomy and Cognitive Domain

The taxonomy of the cognitive learning domain involves a structured progression of learning objectives that serve as prerequisites for each other. This taxonomy is also known as Bloom's (1984) classification approach, which delineates behaviors that reflect the thinking competencies and levels of students or children. This domain includes six stages, ranging from the lowest level of thinking with simple goals to the higher level of thinking. These stages are knowledge, comprehension, interpretation, application, analysis, synthesis, and evaluation (Bloom, 1984). The learning and achievements acquired in each of these steps consist of the prerequisite learning values of the next step. It is almost impossible to achieve the goals of the next stage without mastering the goals of the preceding one. At the same time, the lowest-level thinking skills are used to form the highest-level thinking skills (Rudincki, 2018). For instance, within the context of a social studies course, cognitive goals might include "explaining the basic relations of Turkey with its neighbors, using fundamental principles to elucidate major social phenomena in Turkey, analyzing the main facts about our province, region, and country, and proposing

new ways to solve the main social facts about Turkey's neighbors" (Watanabe-Crockett, 2019).

Information (Certificates Information)

a. Concepts Knowledge (Terms Knowledge)

It comprises terminology with specific meanings pertinent to various disciplinary areas. In the context of the social studies courses previously discussed, key concepts include 'mountain,' 'plain,' 'plateau,' 'plan,' and 'sketch.' The ability of students to recognize and comprehend these concepts is integral to the objectives of this stage. Essentially, the goals of this stage are foundational, focusing on basic recognition skills. Recognition involves the ability to articulate and identify concepts when prompted, as well as selecting them from among their peers.

b. Facts Information

There exists a significant connection between events and phenomena. Events are concrete experiences. In this context, history can be considered a science of events, as it systematically examines situations that have been concretely experienced. The case is generalizations that are reached by starting from the events that have been experienced concretely. In this context, sociology is viewed as a phenomenon. Therefore, the birthplace of facts is called events. For instance, the facts related to the social studies course are generally related to historical events.

c. Tools and Equipment Information

In the context of a Social Studies course, various tools and materials are utilized, including maps, atlases, globes, and historical timelines. The objectives of this educational phase involve students developing an understanding and ability to critically evaluate these resources. Mastery of these tools is crucial for achieving the learning outcomes associated with this stage.

d. Knowledge of Tools and Ways of Dealing with Markers

1. Purchases Information

Maps used in Social Studies lessons are rich with symbols. The knowledge of the use of these symbols is defined as the knowledge of purchases.

2. Orientations and Progressive Sequences Knowledge

There is a chronological order in the generalizations derived from events that have been concretely experienced. As exemplified, historical facts in the Social Studies course adhere to a chronological sequence, such as "the enthronement of the sultans" and "the understanding of the division of history into ages".

3. Classifications and Categories Information

In the Social Studies course, students are introduced to classifications such as 'mountain,' 'mountain range,' 'domestic tourism,' 'foreign tourism,' 'village,' 'town,' 'district,' and 'province.' Mastering these classifications is one of the primary objectives of this step.

4. Criteria Information

Knowledge of criteria involves understanding abstract concepts, which do not typically have direct targets within the Social Studies course due to their abstract nature.

5. Method Information

Given the emphasis on factual content in the Social Studies course, a variety of methods are employed. There are specific objectives associated with the use of these methods. To achieve the predetermined goals, students should be provided with ample opportunities to acquire the necessary information.

e. Knowledge of Universals and Abstractions in a Field

1. Principles and Generalizations Knowledge

Due to the nature of the field, there is knowledge of principles and generalizations expressing social/social phenomena in the Social Studies Course. As it is understood, this information becomes meaningful within the framework of cause-and-effect relationships. For example, principles and generalizations such as the economic structure and developmental level of a country are crucial variables that influence societal lifestyles. Similarly, innovations, inventions, customs, and traditions play a pivotal role, as they constitute the natural, social, and cultural environments in which individuals reside and significantly impact their lifestyles. Therefore, it is crucial for students to have access to information that accurately reflects these values.

2. Knowledge of Theory and Structures

There are theoretical approaches and systematic structures developed for each course and discipline area.

Theories consist of information generated through scientific research methods and techniques, and they are considered valid until challenged and disproven. These theories facilitate a deeper understanding of the subject area and represent the most comprehensive and encompassing form of knowledge available.

f. Knowledge Dimension and Subcategories in Revised Bloom Taxonomy (Krathwohl, 2002)

- Knowledge of Facts: Basic elements students need to be familiar with in a field or to solve problems,
- include (1) terminology knowledge, (2) special details, and (3) elements knowledge.
- Conceptual Knowledge: Understanding the interrelationships between basic elements within a broader
- structure that functions cohesively. This includes (1) knowledge of classification and category, (2) knowledge of principles and generalizations, and (3) knowledge of theories, models, and structures.
- Operational Knowledge: This encompasses how tasks are performed, inquiry methods and skills, and criteria for using algorithms and methods. It consists of (1) special skills and algorithms knowledge specific to the subject, (2) subject-specific technical and method knowledge, and (3) criteria information to determine the use of appropriate operations.
- Metacognitive Knowledge: It involves general cognitive knowledge as well as awareness of one's own cognitive processes. It includes (1) strategic knowledge, (2) knowledge about cognitive tasks, including appropriate contextual and situational information, and (3) self-knowledge. Indeed, this division of the knowledge dimension within this classification has rendered the taxonomy applicable at every class and

school level. Consequently, it serves as a response to the criticisms leveled against this aspect (Krathwohl, 2002).

g. Cognitive Dimension of Revised Bloom Taxonomy and Subcategories (Krathwohl, 2002)

- Remember: Recalling necessary information from long-term memory, such as not noticing and not associating.
- Understand: Involves interpretation, exemplification, classification, summarization, inference-making, comparison, and explanation to determine the meaning of messages, including verbal, written, and graphic communication.
- Apply: It refers to the act of performing a procedure in a specified state, such as executing or implementing.
- Analyze: This involves deconstructing a material into its fundamental elements to understand how these components interact with each other and contribute to the material's overall structure and purpose. Key processes include separating, organizing, and attributing.
- Evaluate: Decisions are made on the basis of standards and criteria, which include actions such as checking and criticizing.
- Create: This involves creating a novel, cohesive whole or integrating elements to generate an original product, such as generating, planning, and producing

h. Revised Bloom Taxonomy Matrix

a. Cognitive Processes Dimension: This dimension encompasses remembering, understanding, applying, analyzing, evaluating, and creating.

b. Knowledge Dimension: This includes various types of knowledge: factual, conceptual, procedural, and metacognitive (Anderson & Krathwohl, 2001, p. 216).

i. Clutch

It is crucial to internalize and assimilate the information acquired during the cognitive stage of the comprehension process. Conversely, tangible, observable, and measurable behaviors manifest externally. Identifying the cause of a phenomenon enables individuals to articulate their thoughts more expressively in their own words, clearly outlining distinct reasons. This capability is further demonstrated through personal examples in explanations, a deepened understanding of the data obtained, and the formulation of new and unique assumptions and behaviors derived from these cognitive processes.

– Turning

For instance, the translation process may be highlighted to render data from the Social Studies Course comprehensible, translating it into written form, graphs, and diagrams, thus facilitating statistical narratives. Through various forms of expression, the aim is to enhance understanding of the results and present the data in a more accessible manner.

– Interpretation

Depending on the achievement of the objectives of the preceding stages, the objectives in the interpretation step can be realized because the stages of knowledge are the same in terms of the objectives of each stage. As previously emphasized, within the Social Studies Course, learners are tasked with explaining and elucidating the cause of the principles, phenomena, and the similarities and differences between them through their own sentences.

– Shift

This perspective revolves around students' adherence to established rules and regulations within the framework of the learning acquired in their classes, their capacity to contemplate potential changes, and their ability to articulate these thoughts in diverse manners.

– Application

To attain the objectives of this stage, the targets set in preceding steps must be achieved, as in the others. Thus, in this stage, students apply all knowledge acquired in the cognitive domain to address new and unprecedented problems. For instance, within the Social Studies Course, issues such as migration, population growth, agriculture, tourism, and trade are presented as problems, and students are tasked with proposing solutions based on the information acquired.

– Analysis

In this stage of the cognitive domain, the entirety of the learning acquired in this stage is divided into the smallest meaningful units of information, facilitating comprehension and offering opportunities for synthesizing new complements. Within this context, tasks such as 'analysis of elements,' 'analysis of relationships,' and 'organizing principles' can be mentioned. Additionally, this step allows for the examination of both part-to-part and part-to-whole relationships. Thus, in the analysis step, students engage in detailed examination of elements, explore relationships, and study organizing principles.

– Synthesis

It is anticipated that in this step, the targets for re-meaning will be acquired, and the synthesized information will be divided into meaningful units. Within the analysis phase, there is a necessity to generate more comprehensive wholes. Integration is done based on certain relationships and rules. At this stage, innovation and originality are paramount. Typically, novel methodologies for addressing social issues, technological advancements, the creation of innovative plans, and the establishment of new principles elucidating social phenomena are developed. Within this phase, three sub-stages are identified: creating unique communication content, elucidating plans or proposals for team transactions, and developing abstract relationship team. Undoubtedly, the most significant gains in this step are the creation of an original whole through creativity, rather than merely assimilating the existing body of learning, and the acquisition of new information that more closely approximates the truth at this stage of knowledge. In this context, the dimensions of producing

unique communication, planning, process objectives, and the establishment of abstract relationships are also critical.

– Evaluation

Assessment involves making evaluations based on measurements and obtaining information about the success of the work. It entails interpreting the measurement results according to predetermined criteria and ultimately forming a judgment. Decision-making mechanisms are also employed in this step, leading to various determinations of success or failure. Various methods and applications are utilized for evaluation, categorized under judgment based on internal evidence and judgment based on external criteria. Special attention is given to evaluation based on internal evidence and external criteria, devoid of bias.

Application Examples Related to Cognitive Learning Stages

a. Knowledge Step: This step involves acquiring essential knowledge. For instance, students learn about significant events, such as the opening of the Turkish Grand National Assembly on April 23, 1920.

b. Interpretation/Comprehension Step: Students evaluate and interpret the provided information based on their own perspectives. For instance, they may analyze how Mustafa Kemal Atatürk initiated the National Struggle in a country occupied by victorious states after the First World War by mobilizing public consciousness towards the liberation movement, ultimately leading to the establishment of the Turkish Grand National Assembly.

c. Implementation Step: The students delve deeper into this event using the information acquired in previous steps and the conclusions they have drawn. They visited the parliament building, inaugurated on April 23, 1920, and studied the memoirs and writings of the deputies who served during that period.

d. Analysis Step: Students gain a thorough understanding of the processes involved in the opening of the Turkish Grand National Assembly. They are able to contextualize its significance within the historical timeline.

e. Synthesis Step: Students are now capable of formulating hypotheses, generating data independently, and conducting self-assessments and comparisons pre- and post-establishment of the Republic.

f. Evaluation Step: In this stage, students are able to make self-evaluations regarding the situation and make judgments about it. For instance, they realize that the Republican administration is better than other forms of administration. They assimilate and fulfill its requirements and turn it into a philosophy of life.

Cognitive Competencies of the Turkish National Education System with the Dimension of General Objectives

Developing the national, moral, humanitarian, spiritual, and cultural values of the Turkish Nation. This includes fostering an awareness of their duties and responsibilities towards the Republic of Turkey—a national, democratic, secular, and social state of law based on human rights and the foundational principles outlined in the Constitution, and acting according to these principles and values. Moreover, these objectives aim to develop individuals with well-rounded and mentally balanced personality traits.

In other words, individuals should have the skills that enable free and scientific thinking, along with the capacity to be constructive, creative, and productive in their studies. This includes acquiring the necessary knowledge and behaviors to prepare for life by developing interests, talents, and abilities. Additionally, gaining the expertise and behaviors required by profession not only contributes to personal fulfillment but also enhances societal well-being.

3.2. Affective Domain

Information about the value system of learning is derived from the affective learning domain, which is intensely related to human emotions. This area emphasizes the importance of emotions, preferences, values, moral rules, wishes, desires, motivations, and orientations that students aim to acquire. Such elements are considered significant achievements within this learning domain. Individuals with selective perception may show heightened interest in certain objects, reflecting a broader, universally accepted reality, and may develop a determined stance on certain issues. Affective learning has control mechanisms that play a key role in all learning areas, and the systems that manage and control while transforming learning from other learning dimensions into behavior are related to this area. Considering the variables that enhance the significance of field education in educational and training processes, it is essential to recognize that each individual is born with distinct capabilities. As a result, the learning process for each person is as unique as their fingerprint. Such personalized learning experiences hold specific relevance to the individual. This personalization inherently leads to the emergence of individual differences, illustrating that the perception and utility of information vary significantly among individuals. It is anticipated that the learning to be acquired will be scientific, close to human life, and facilitative of human life. They do not want to obtain information that does not meet anyone's needs and does not meet these criteria. They do not want to obtain information that fails to meet these essential criteria or does not fulfill anyone's needs. The most important factor contributing to the permanence of acquired learning is its relevance to the learner's needs. Therefore, individualization of education gains importance. Schools should not only facilitate knowledge acquisition but also foster love, a core aspect of the affective learning domain. Effective education within this context empowers students to freely express their feelings and needs, treat themselves and others with respect, and achieve self-control goals. Additionally, this domain includes goals such as tolerance, satisfaction in collaborative work, love for family, homeland, nation, flag, and friends, as well as respect for elders.

The early years of schooling carry immense significance as they serve as formative periods during which children develop their beliefs and attitudes, many of which tend to endure into adulthood. Research indicates that altering values and attitudes acquired by children before the age of 13 is often challenging. Therefore, it is crucial to expose students to a wide array of attitude objects to foster the development of positive attitudes towards various values and concepts. Additionally, providing students with

positive experiences related to these objects can further reinforce the cultivation of favorable attitudes.

3.3. Affective Domain Classification

In order for learning to occur within the affective domain, it is crucial that objectives at the knowledge level within the cognitive domain are first met (Erden, 1991). Affective responses, such as love, hate, or fear towards genuinely unfamiliar phenomena, cannot be developed. With regard to the affective domain, five sub-levels can be identified and classified into stages.

a. Receiving Step

- **Awareness:** Developing affective behavior begins with awareness. For instance, in a Social Studies course, a person who does not recognize that others may hold diverse thoughts and beliefs is unlikely to exhibit appropriate learned behaviors towards them in any context. This is because awareness of an object or phenomenon is a prerequisite for being receptive to future stimuli. For example, educators might instruct students to “Discuss and write about issues like overpopulation and transportation” to stimulate awareness and reflection on these topics.
- **Openness to Receiving:** In this stage, the individual does not reject the incoming stimulus through selective perception, nor does he evade it. Instead, he demonstrates an orientation towards engaging with it. For example, the target behavior at an annual unit level might include a tendency to listen to people with different beliefs and thoughts. Expected behaviors include listening without interrupting the speaker and refraining from dismissing or ignoring the speaker’s arguments.
- **Controlled Selective Attention:** In this step, students actively engage with external stimuli by selecting one or more to focus their attention on. They concentrate their efforts entirely on the chosen stimuli. For instance:

- a. **Target:** A target behavior for primary education at the annual unit level might involve careful selection of publications on social issues.
- b. **Behaviors:** Writing or articulating the names of at least three television broadcasts concerning social issues, without mentioning the specific times or periods these were aired and without naming at least three individuals involved in addressing social problems.
- c. **Among the attitudes and behaviors related to this affective learning area:** Attentively observing the pictures or items displayed in an art exhibition, demonstrating awareness of both existing and potential social issues, recognizing the importance of understanding and obeying to traffic regulations, demonstrating meticulousness in selecting publications related to educational and training activities, developing an aesthetic understanding of various issues and providing assistance to others. Additionally, attitudes and behaviors such as empathy, understanding, and effective listening are essential components of this domain.

b. Reacting

In this step, individuals are capable of appropriately responding to both external and controlled stimuli.

1. **Compliance:** Compliance can be defined as a student’s adherence to mutually agreed-upon rules while collaborating with their spouse, friends, and peer groups, along with a willingness to follow these guidelines. Typical behaviors demonstrating compliance include arriving at work at the designated time, completing assigned tasks competently without objections, and finishing these tasks within the stipulated deadlines.
2. **Willingness:** This refers to a volunteer’s eagerness to adhere to the rules of social assistance and actively engage in related activities. Typical behaviors include voluntary participation in social assistance branch/club activities, dedicating time to such endeavors, and willingly fulfilling assigned duties.
3. **Satisfaction:** Satisfaction involves taking pleasure in doing tasks assigned by the group using democratic approaches. Typical behaviors associated with satisfaction include dedicating time to the assigned tasks and volunteering to participate in group activities when it is appropriate.
4. **Reaction:** This aspect involves engaging in discussions about products or artworks, adhering to school discipline and traffic rules, volunteering to take duties and responsibilities within social organizations, having a high level of health literacy awareness, complying with the rules of the game, gaining the habit of reading assigned tasks. Attitudes and behaviors such as willingly offering greetings and assistance, taking responsibility for others’ health protection, or paying attention to not smoking in crowded places are developed within the framework of the legislation.

c. Valuing

This step pertains to attitudes, beliefs, and values, particularly within the context of the social studies course.

1. **Accepting Value:** This involves responding to an external stimulus with the same affective response, aiming to recognize and appreciate the importance and value of principles such as peace at home and peace in the world.
2. **Preferring/Adopting Value:** At this stage, one socially dimensional value may be prioritized over others. The aim is not to be open to any kind of criticism. Typical behaviors include refraining from soliciting criticism from peers, disregarding criticisms without objection, not reacting angrily or feeling offended by critics, and not expressing gratitude for criticism received.
3. **Feeling Responsibility:** It becomes crucial and necessary for individuals who have attained the goals of the preceding steps to take responsibility for their attitudes and behaviors.
4. **Commitment to Value:** Those who accept and adopt a value and can take responsibility within that framework will diligently uphold this value and explore related options.

C. Psychomotor Area

a. To Be Warned

The arousal phase involves directing attention to the realization stages of skill within the perception step, heightening awareness of skill execution. In other words, it can be said that the behaviors of finding and identifying, realizing, paying attention, and revealing the difference are at the level of perception. In a sense, the learners are aware of skill behavior units. Typical behaviors observed at this stage include sensing, listening, observing, feeling, tasting, and monitoring.

b. Making Guidance/Guidance Control

This phase entails the imitation of skills and attempting to execute them independently. During this step, activities such as regulation, creation, draft drawing, repetition, copying, and guidance are observed. It resembles the process of learning behavior through imitation.

c. Mechanization

Psychomotor skills involve the ability to perform a skill close to desired standards. Mastery of activities such as precision, repair, clarification, and application is crucial, requiring independent execution. This process resembles the development of various skills in accordance with established standards.

d. Make a Skill

In this stage of psychomotor skill acquisition, there is an automaticity of learning and execution. Essentially, the desired behavior is performed accurately and in accordance with established standards. This includes activities such as fixing, altering, building, performing tasks completely, demonstrating and completing tasks automatically. It is akin to executing any task professionally and proficiently.

e. Fabricated

In order to achieve the objectives of this step, the skills must be acquired in new and different situations. In a sense, it means generalization. This stage involves processes such as adapting, replacing, correcting errors, reorganizing, modifying, and reviewing. An analogy for this would be how knowledge of riding bicycles can facilitate a quicker and easier understanding of how to operate motorcycles.

f. Creation/Revealing

In this phase, learners are expected to create an original skill structure that demonstrates the ability to synthesize new ideas and methods. This involves arranging, merging, innovating new acrobatic movements, revealing original skills, and planning behaviors. For example, it is like developing a new stroke/shooting style on the football ball.

absolute correct knowledge of how human learning is still happening. Therefore, we inevitably come into play the theories and approaches and try to understand how man can learn on the basis of learning theories and approaches. In this study, the principles and generalizations derived from the theoretical framework were subjected to a ranking depending on the structure of the information. Thus, a significant awareness was tried to form.

It can be said that educators can enhance learning by taxonomically approaching the learning areas in the information process, thereby facilitating more permanent and trackable learning outcomes.

CONFLICT OF INTEREST

The authors declare that they do not have any conflict of interest.

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4. CONCLUSION AND RECOMMENDATION

With this study, it is understood that cognitive, affective, and psychomotor learning levels in the field of education and training have an important basis for learning, human relations, environmental adaptation processes, and the transformation of acquired learning into a product. The study addresses critical questions to identify, resolve, and refine problems, such as 'Why does this occur?', 'How did it emerge?', and 'What are its implications for additional losses and gains?' Humanity does not yet have an