

# Educational Learning Theories-based Teacher Preparation

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**Abstract:** Education is considered one of the most essential fields; it is the profession of the prophets; it acquires special management for teacher roles addressed in terms of teaching, learning, and guidance, transferring experiences, and contributing to preparing human beings to live in dignity in societies where security, peace, love, harmony, justice, mercy and other Islamic virtues of socialization prevail in its various dimensions.

The old methods of education relied on personal or voluntary efforts. It focused on content such as religion and language teaching in most of its tracks and learning craft professions in other ways until different countries adopted formal education and established institutions for it that is concerned only with teaching professionally.

The teacher is considered the central pillar in the educational process development, as he contributes very effectively to developing students' performance and guiding them in the right direction towards good citizenship. It also deals with their minds and ideas, refining and training them in all aspects of knowledge and technological progress.

This paper clarifies the concept of teacher preparation - old and new. It explains and extracts the idea of teacher preparation in the light of constructivism theory. It sheds light on teachers' views in the light of constructivism theory, the 4MAT model and traditional learning styles.

**Keywords:** Constructivism theory, Effeminates, Learning styles, McCarthy Theory, Traditional classroom, 4MAT model.

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## I. INTRODUCTION

The success of any educational system depends primarily on the level of teacher preparation, so the development of teacher preparation institutions has become an essential and urgent requirement for achieving comprehensive human development, and the report of the International Commission on Education in the Twenty-first Century has emphasized the principle of equal educational opportunities and the need for continuous teacher training between the stage of preparing teachers before service and the stage of training. (Ministry of Education)

This experience has gone through multiple stages and was linked to the development of societies until education and the quality of its products became a sign of the story, development and civilization of the community, and the status of the teacher reached a high rank among conscious nations, so he was reminded of goodness everywhere and celebrated in every forum.

## II. THE CONCEPT OF TEACHER PREPARATION IN THE PAST

The set of knowledge, concepts and diverse experiences provided by an institution to a group of teachers to interact with each other modifies their behaviour. It achieves the educational goals that they disseminate in a comprehensive and integrated manner (Abdul Mohsen Al-Aqili, 2005).

Those plans included all courses of study in a particular field of education and achieved the objectives of educational institutions.

That organized system of cultural, academic and professional experiences provided by faculties to their students to prepare them for teaching.

Skills and emotional experiences provided by faculties of education during specialized and educational courses, general culture courses, and the activities of the applied part of these courses enable teachers to abide by the stages of public education in their teaching methodology (Mohamed Ibrahim, 2007)

### **III. THE CONCEPT OF PREPARING THE TEACHER RECENTLY**

Teacher preparation means that the educational institution provides a set of knowledge, skills and educational experiences to students, intending to interact with these experiences in a way that gives them knowledge and skills and works to modify their behaviour and achieve academic goals (Al-Shumairi, 2009).

Kandil (2005) also defined it as providing special courses to develop skills, information, and attitudes necessary for the teacher to help him perform his work tasks. It is divided into two parts: pre-service preparation and in-service preparation.

The teacher preparation program is defined as "a competency-based system, which determines the type of competencies that the student teacher should acquire and determines the criteria that will be used to evaluate the extent to which the student receives these competencies and makes him responsible for developing these competencies (Shouq and Saeed, 2001).

### **IV. TEACHER PREPARATION IN THE LIGHT OF CONSTRUCTIVISM THEORY**

To achieve the desired educational goals, several modern theories have emerged in recent years, each of which is the basis for teacher preparation and the nature of the strategies he uses in teaching, which would enable students to interact with and develop their environment. Among these theories, which are considered modern, is the constructivism theory, which is supposed to be used in classrooms, as well as several educational models concerned with the pattern of building knowledge and the steps to acquire it. The research conducted by psychologist "Jean" Piaget's growth and development of expertise in man laid the foundation for the constructivism theory. Piaget has developed an integrated and individual approach to the learner's cognitive development», and this theory has two essential parts: logical determinism and constructivism. The educational process, from a constructivist perspective, is a personal, reflective and transformative environment in which ideas, experiences and perspectives are integrated, thus growing new knowledge and experiences. (Abdelazim Sabri and Reda Tawfik, 2017)

The practical importance of constructivism theory lies in the fact that the learner himself builds knowledge and possesses solutions to problems so that this knowledge becomes an integral part of him. Therefore, the teacher's preparation in light of this theory lies in training him to make students the focus of the educational process. That gives them confidence in building knowledge themselves and develop their skills to solve the problems they face. Before we discuss constructivism's opinion on teacher preparation, it is necessary to stand on the assumptions on which this theory is based as it proceeds from the following assumptions: (Hummel and Al-Anadi, 2015)

1. Knowledge does not express reality but represents the learner's vision of reality as he sees it. Some constructivists have even considered that the learner's activity and knowledge are inseparable, as the processes of learning are the learner's activity.
2. The criterion for judging knowledge among constructivists is not identical to the reality expressed. Still, it is a human process in the sense that it works on the proper management of the individual's affairs and the solution of cognitive problems: knowledge is a problem-solving tool.
3. Knowledge does not exist independently of self-knowing but rather linked to and associated with it. Therefore we only exaggerate if we say that two learners are not similar in their knowledge of a specific field.

In light of the previous assumptions, the principles of constructivism in teacher preparation can be extracted and explained as follows: (Abdelazim Sabri and Reda Tawfik, 2017)

**A. The first principle**

The relevance of education to the needs and students' interests

This principle is related to the essence of building knowledge, where the new experience interacts with the cognitive construction of the learner, the student organizes his world in meaningful formations or structures through which he realizes the general form, and therefore he depends on all his previous personal and educational experiences to find the meaning of new experiences. The first principle of constructivism is to train teachers to present issues of interest to their students and suit their needs. An important question should arise, and they must answer it practically: Do students study what suits their needs in the present or in the future? Solving this problem requires the teacher to have the skills of flexibility and imagination so that he helps to reach the content and style that suits the needs of the learner present, which is a vital point to help him in the future. Teachers' preparation programs should include training in the design of learning tasks that allow the student to reflect, imagine, multi-vision, and test the credibility of his learning. Moreover, applying mechanisms helps him understand the relationship between what he studies and reality.

**B. The second principle**

Building Courses around Basic Concepts

The basic concepts make the learners split the meaning of their analysis into modules. They can realize the relationship between the basic concepts he started with and the modules he reached by analysis. He created a new understanding of concepts and modules, so when preparing the teacher, he must be trained to stay away from providing separate parts because the learner finds it difficult to realize them ultimately, but his training must focus on holistically presenting concepts; Fractions (Ahmed Al-Mahdi Abdel Halim, 2003)

**C. The third principle**

Encouraging students to express their opinions

Training the teacher to understand the student's vision of himself and his world is a fundamental principle in preparing the teacher in constructivism theory - where new experiences are inseparable from existing experiences - and constructivist learning employs this understanding in raising students' motivation to learn», and in designing educational tasks and without this understanding the teacher turns students into one block or one template, whether in teaching his subject or his expectations for their performance», which deprives many of them of opportunities for excellence and may expose many of them to the risks of learning difficulties or retardation. School. Students vary in their ability to adapt to the same teacher-imposed model.

**D. The fourth principle**

Adapting the course to the mental, emotional and social potential of students

Teaching and learning processes are active when the requirements for success in the course are compatible with the student's potential, and this means that there is a relationship between the needs of the course and the student's experiences and preparations. Therefore, this principle means training the teacher to take responsibility for adapting the system according to the needs of his students so that it addresses their experiences, trends and expectations; if the teacher fails to achieve this principle, he empties the course of its meaning for his students and around him, Therefore, teacher preparation programs had to include this critical principle (Ahmed Al-Mahdi Abdel Halim, 2003).

**E. The fifth principle**

Integrating Learning Measurement within the Teaching Process

Educational measurement is an essential element in the teaching and learning process, so some believe that measurement is an entrance to reform education, and this is true. Still, any measurement if we exclude some individual jurisprudence or some renewal, we find that measurement comes after the teacher and the learner finish one or more academic units to reassure that the student can correct answers that guarantee him success. In this case, thinking declines in all its forms and ready-made information becomes the supreme goal of the teacher and the learner. This contradicts the constructivism that directs the teaching and learning process to modify and develop students' cognitive structure by reacting to new educational experiences.

Hence, it is necessary to train the teacher on structural measurement to assess the extent to which the learner understands his world and how he can modify and reorganize his previous experiences due to his interaction with new experiences.

The structural measurement has a diagnostic function» where the teacher uses standards to identify the strengths and shortcomings in the learner's understanding of new learning experiences and organize them in the construction of the cognitive and from this diagnostic function puts the knowledge of his plan to suit the needs of the learner» The teacher must know that structural measurement does not aim to classify his students or their ranking, but seeks to deepen the understanding of their world by identifying their strengths and shortcomings (Ahmed Mahdi Abdel Halim, 2003)

## V. TEACHING CONCEPT IN THE LIGHT OF CONSTRUCTIVISM THEORY

The teacher in the traditional classroom is very different from the constructivist classroom, and the following comparison illustrates this: (Abdelazim Sabri and Reda Tawfik, 2017)

The teacher in the conventional classroom presents the course as parts while dispensing with basic skills. Strictly adheres to the course (textbook). They have what he sees fit.

He seeks the correct answer as a guide to what the instructor has achieved. His students work individually.

### [1] The teacher in the constructivist classroom

The course is presented as a whole unit and emphasizes significant concepts.

- Cares about his students' questions.
- His classroom activities depend on automated sources from the reality of the environment.

Each student is seen as an independent scientist with his vision and construction of the world around him.

Seeks the student's point of view to understand what the student understood and uses this understanding in planning the following lessons.

In light of the above, it is clear that the preparation of the teacher in the light of the constructivist theory and given the many additions contained in that theory to the teaching and learning process, this theory has emphasized the preparation of the teacher in a way that enables him to activate the active role of the student in learning and also emphasized the intellectual participation of the student so that meaningful learning occurs and based on understanding and the teacher has a significant role in achieving this role and that participation.

## VI. TEACHER PREPARATION IN THE LIGHT OF MEANINGFUL EDUCATION THEORY:

This theory asserts that the most essential factor in influencing teaching and learning is the clarity and organization of the learner's cognitive structure. The cognitive system consists of facts, concepts, issues, relationships, and theories available to the learner at a given moment. The scientist "Ozobel" believes that meaningful learning occurs when the learner links new ideas and information to his cognitive structure. It is recognized that the teacher can only sometimes assume that students' cognitive structure includes ideas that can be linked to new ideas or information; Before submitting the educational material. Structured content or content is selected based on its relevance to explain and integrate the presented educational material. According to Ozobel, the work of an educational institution is to determine the organized knowledge that makes up the various sciences. Meaning is a strictly differentiated emotional experience. It is clearly defined and emerges in the individual when symbols, concepts and issues are connected to each other and are absorbed into his cognitive structure (Badria Al-Mufarrej, 2007).

Ozobel emphasizes that the most important factor in the teaching and learning process is the amount of awareness, clarity and organization of what the learner already knows in his cognitive structure because he focuses on the exact sequence of educational experiences so that the unit that is learned is clearly linked to what precedes it.

It is this correlation between the learner's current cognitive structure on the one hand and the new material he will learn on the other - what makes this new material meaningful - and moves away from learning based on memorization and memorization. Here, the institutions responsible for preparing the teacher must be aware of this topic, so that the teacher is trained on it before joining the service. (Bayoumi Mohammed Al-Dahawi, 2000).

Ozobel classifies the types of meaningful education into four basic categories, arranged hierarchically from lowest to highest as follows: The teacher must be trained to use them to activate them with his students: (Abdelazim Sabri and Reda Tawfik, 2017)

It is the one that appears in learning the meaning of separate symbols and is one of the most important cognitive activities for the learner» These symbols first take a form of words spoken by parents to the child and then refer to the things that the child pays attention to.

The meanings that the child gives to the words then become the visual or auditory image that the object evokes. With the repeated association of the symbol (word) with the object, the mere presentation of the symbol alone evokes the visual image of the object that composes the meaning. For example, a child sees, for example, an orange in his early childhood and hears the word orange, so he associates the symbol with the image, and when he goes to school, learns to read and reads the word orange, the child's mental image is associated with the symbol written in front of him.

Oswell distinguished between two stages of Concept learning The first stage is the formation of the concept, which is the process of inductive discovery of the simulated properties of the class of stimuli. These characteristics are integrated into a representative mental image of the concept, an image that the child develops from his actual experience of individual stimuli or situations and can be called (i.e. images) even if there are real examples (Abdelazim Sabri and Reda Tawfik, 2017)

The second stage of learning the concept is learning the meaning of the name of the concept, which is a type of representational learning where the child learns that the spoken or written symbol (the word) is like the concept that he has already acquired in the first stage. A teacher who has a major role in the student's learning of these concepts: So include in its preparation programs.

Ozobel argues that for the learning of issues to be meaning-based, the subject being taught must be linked to the learner's current ideas in his cognitive structure. (Bayoumi Mohammed Al-Dahawi, 2000).

Among the types of meaningful learning: receptive learning with meaning, which is the learner's linking and integrating the information provided to him with his cognitive structure, and there is discovery-learning with meaning, which is the learner discovering the information subject of learning - partially or completely - and then linking and integrating it into his cognitive structure.

In his theory, Ozobel focused on learning being meaningful. This is done because of the entry of new information into the mind of the learner: that information that is related to his previous stored information; where the new information is mixed and interacted with the previous one to become part of his cognitive structure.

Meaningful learning occurs only if the educational material is linked to the previous educational background of the learner, which consists of related concepts, principles and ideas that make the emergence of new meanings possible, and this needs a teacher who has the skills that enable him to achieve this, so it must be prepared according to the above to achieve meaningful education referred to by "Azobel".

## **VII. TEACHER PREPARATION IN THE LIGHT OF THE THEORY OF INFORMATION ORGANIZATION**

The theory of information organization and processing is one of the modern cognitive theories; it is a revolution in the field of memory study, as the philosophy of this theory is based on the unity of memory and the association of its effectiveness with the level of organization and processing. This theory differs from the old cognitive theories in that it was not limited to describing cognitive processes only, but tried to explain the mechanism of occurrence of processes and their role in processing information and the production of behavior, and this theory is based on a number of assumptions that: (Abdelazim Sabri and Reda Tawfik, 2017)

- 1- Organizing and processing information for the learned material leads to more continuous learning for the learner.
2. Information is organized and processed in steps represented by mental activities.
- 3- There are limits to the amount of information that the learner can process and learn.
- 4- The human processing system is an interactive system and not just receiving information.

5- Automatic repetition of information is not a condition to remember it because the learned material is not related to the learner's cognitive structure.

The levels of organization and processing of information vary from surface to depth through an average level of processing as follows:

- 1- Superficial or marginal level: in which information is processed at the sensory level or according to its formal characteristics only.
- 2- Deep level: in which the information is processed according to what has been known by the learner and then a classification of that information is developed.
- 3- The deeper level: in which information is processed according to its meaning, where the information is organized on the basis of semiotic treatment, i.e. meaningful.

The level of information processing is defined as: the space that can be employed from the network of meaning-related associations within memory in organizing and processing information.

The teacher prepared for education must be aware of the previous concepts. Through his preparation programs that should focus on the latest theories in teaching and learning and include them in his training programs. Accordingly, the teaching and learning process according to the philosophy of this theory can be explained as follows:

The process of acquiring information and skills is improved when the learner is able to pay attention, perceive, and search for the information he needs; that information flows to sensory recorders where the brain encodes it and converts it into short-term memory. It is the active memory that memorizes a small amount of information» if that information is repeated and the learner performs mental operations on that information. Like organization and retrieval, they move into long-term memory and thus germinate information and acquire skills.

Short-term memory differs from long-term memory in that the former stores events or experiences that the individual has previously experienced in the form of brief photographs to facilitate their retrieval later. And this memory is related to the subjective experience of the individual. The second (long-term) is responsible for retaining meaningful information such as words, symbols, and meaning-based relationships. This memory forms the framework or cognitive organization of the individual, so this memory varies from one individual to another.

This theory attributes learning problems to a defect or disorder in one of the processes that may be due to the organization of information provided to these students. Which negatively affects their retrieval, classification, and processing. Some studies have recommended the need to propose strategies considering this theory that work to organize the information of these students consistent with their mental abilities and help them process and retrieve it.

### **VIII. THEORETICAL CONCEPTS - FOR THE THEORY OF ORGANIZATION AND PROCESSING OF INFORMATION:**

(Abdelazim Sabri and Reda Tawfik, 2017) stated that the theory of information processing is one of the prevailing contemporary trends in the psychological theory of thinking, and the concepts and terms included in the direction of forming and handling information came from the use today important concepts such as image, attention, memory and other concepts that share some important characteristics that he mentioned (Essam Al-Tayeb, 2006), including:

- 1- These concepts refer to processes that are supposed to occur within the human mind, and therefore identifying them needs to be studied in indirect ways through their direct manifestations in apparent behavior.
- 2- These concepts emphasize that cognitive processing produces behavior, which is sometimes characterized by complexities that are not at all commensurate with the events that provoked it, or that processing on the other hand may reduce a very complex exciting situation when responses are issued.
- 3- These processes occur even if there is no direct relationship between them and the behavior issued by the individual, as they are the ones that prepare for that behavior.
4. This processing or handling may be from top to bottom, in which the individual begins to form and address information from the overall context of the subject and then proceeds to address its constituent elements. It may be abottom-up approach in which an individual begins to address the elements that make up the topic first and then moves on to the topic as a whole afterwards.

5. As well as the term sequential processing, which assumes that the individual does not take any new step in processing until he finishes processing the previous stimulus or stimulus subject to treatment.

6- As well as the term careful or simultaneous processing, which assumes the possibility of the individual performing several operations simultaneously.

Magdy Habib (1996) stated that information processing theory used new terms on psychology, most of which are borrowed from the language of electronic computers, the most important of which are the following:

- 1- Inputs: including stimuli, data, data, processes or the most concept.
- 2- Effeminates: It means the result and is similar to the organism's performance.
- 3- Processing: It is a process between inputs and outputs.

The theory of information processing believes that the organization and processing of any information includes passing through several stages, when the information is provided to the individual, it remains for a concise time in a store called the store of direct memory, or sensory, and that the capacity of this memory exceeds the ability of the individual to remember, meaning that the individual can not remember all the information in this store, but only remembers the information that gave him a measure of attention, Which moved to the short-term memory store where the information lasts for a minute or more and this information needs to be organized and saved until it moves to long-term memory (Endo & Yami, 1991)

When information is received, some of it is stored, and therefore can be retrieved, meaning that it is encoded by visualization, organization or structure, and two types of encryption in memory are used that are of particular importance: optical codes and abstract codes.

Considering the above, it is possible to conclude the educational applications that the theory of information organization and processing can achieve among students (Abdelazim Sabri, 2010):

- 1- Pay attention to visual or verbal input so that short-term memory is activated in these students.
- 2- Focusing on the activity of these students in absorbing new information to facilitate the retrieval of this information at any later time.
- 3- Organizing information logically according to an organized series of mental steps and activities that lead to each other.
- 4- Reiterating the information successively to ensure that it remains in the memory of these students.
- 5- Paying attention to asking questions in all steps of organizing information, to make it easier for these students to process them according to their mental nature.
- 6- Emphasizing the principle of integration and unity when preparing the scientific content provided to these students, because they will organize and process information based on the common elements between them.
- 7- Focusing on providing these students with various skills through continuous training to keep the impact of those skills in their long-term memory.
- 8- Attention to organizing information based on the formation of meaning more than memorization and remembering.
- 9- Emphasizing the attention of students and not distracting their minds from the steps that require them to process the information presented to them.

## **IX. TEACHER PREPARATION IN THE LIGHT OF LEARNING STYLES**

The quality standards of education advocated by international and national bodies such as the National Council for Accreditation of Teacher Education require taking into account individual differences in learners' styles, every learner has the right to a better education and to learn according to the way he can learn. From the individual to stimuli in learning contexts and these responses to stimuli are behaviors and are the components that make up the individual learning style. (Ahmed Abdul Rashid, 2014)

There are many educational models associated with the teaching and learning styles of learners, perhaps the most prominent of which are the dual learning model and the format model; the format model or the quadruple model of learning styles is an educational model that translates the concepts of learning methods into actual actions. The bodies preparing the teacher must inform him of these models so that he can implement them with his father. Maker Thi has developed a system for teachers to plan learning experiences for all categories of learners by drawing on John Dewey's theories of learning by doing, as well as David Kolb's theory of learning by repetition (Abdelazim Sabri and Reda Tawfik, 2017).

The MAT4 model of learning styles is a training educational model that combines the basic principles of several theories based on the stages of human development in addition to modern theories in the functions of the human brain. The theories of human evolution by John Dewey, Carl Jung and David Kolb formed the theoretical philosophy of the quadruple model of learning styles. These theories have assumed that the basis of human learning is a continuous individual adaptation resulting from his (individual) building meanings in his life. The model also benefited from Studies that dealt with the nature of the human brain and the application of this nature to teaching and learning situations.

The application of the quadruple model of learning methods in education and teacher training to use it is one of the successful projects in the United States of America and a number of foreign countries; it is a system of teaching, learning and training that relies on learning methods and the control of the half of the human brain. Nineteen schools in the United States and Canada have benefited from the application of the quadruple system of learning methods in long-term pedagogical projects. These schools have achieved impressive results after teachers applied this model. This was reflected in the academic achievement of male and female students and their attitudes towards teaching and learning.

The following is a description of the "McCarthy" model, which the teacher must train 4 Mat, which contains four quarters of learning, which appears in figure 1:

First Quarter: It addresses learners who feel the importance of academic content in their lives, which generates a strong motivation for them to learn; it answers the learner's internal question, "what"?, and the answer shows how important the content is to learners. The teacher in this quarter must: (EbrAhim Abdel Aziz Abdel Baq, 2011)

- Motivates learners to the subject of learning.
- Discuss with them the importance of this content for them in their lives.

Second Quarter: This quarter addresses learners who are interested in acquiring new knowledge and linking it to their previous experiences, so it answers the learner's internal question, "What?"

Third Quarter: This quarter addresses learners who are looking for practice and application of the information gained from the content, so it answers the learner's internal question, "How"? That is, how can the acquired information and data be converted into an actual application?

Fourth Quarter: It addresses those learners who have ideas of actually applying the acquired information but in other new contexts, so it answers an internal question of the learner "what if"?

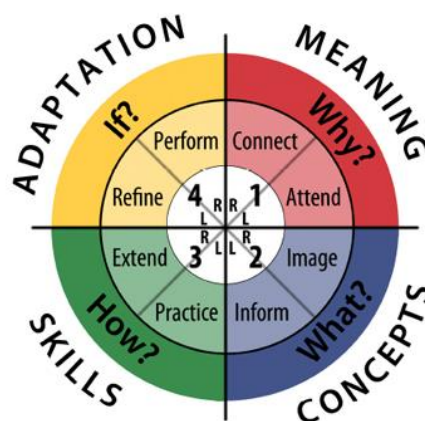


FIGURE 1. The 4 MAT model



**TABLE I. The appropriate learning styles for each stage of the "McCarthy" model**

Stage	Reflective note	Crystallization of the concept	Active experimentation	Mental listening, speaking, interacting, storming
<b>Aim</b>	Why do I learn?	What will I learn?	How do I learn?	What? what if?
<b>Teacher</b>	Imagine	Analytical	mental	Dynamic
<b>Learning strategies and methods</b>	Develop questions for class discussion. Bring up a story at the beginning tangible physical experiences	Observation, analysis, classification, theories	Experimentation, action	Modification, adoption, love of adventure, creativity
<b>Suggested activities</b>	Putting exercises to be solved by the student. Completion proposal Request to complete a mind map.	Suggest a self-reading review. Status addresses can be extracted using the Internet. Subject matter interview. Suggest computer programs that can contribute to clarifying concepts.	Encouraging students to draw educational paintings. the lesson. The suggestion of watching a movie brought up a case for storming Do practical experiment. small projects. Create a play on the topic of the lesson.	Help the student to propose projects that support some of the other ideas in the project the lesson. Request to write a report on a specific topic in the lesson.

Source: Dr. Siham Radwan Awwad Abdullah, The Impact of a Program Based on the McCarthy Model on Developing Mental Motivation among Qassim Students.

Stages of the 4MAT model of McCarthy:

Studies (Ibrahim Al-Zuhairi, 2007) and many types of research indicate that the format model (4mat) consists of four stages according to the four learning styles. Each stage is divided into two sub-steps, so the model includes eight steps, each of which suits a specific type of thinking skills, mental abilities and a few other skills that must be available in order for learning to occur, and these stages and steps:

First Stage: Reflective Observation:

Here learners have the opportunity to move from perceptible experiences to meditative observation. The teacher should explain the value of learning experiences and their personal significance to them and give them enough time to discover the knowledge or meaning involved in these experiences. Lessons begin with the teacher finding the relationship between learners and the knowledge they will learn, and it is necessary to create confidence that allows each learner to share their opinions personally and to dialogue with and discuss them. In order to provide a learning environment that allows learning and discovery to occur (Ebrahim Abdel Aziz Abdel Baq, 2011).

The second stage: - Concept Crystallization: -

The learner at this stage moves to the crystallization and formation of the concept in light of his observations, and the teaching depends on the traditional method. The teacher must provide learners with the necessary information, provide information in a structured manner, and encourage learners to analyze data and build knowledge, and this stage includes two steps:

The third stage: - Active experimentation:

Learning moves to the stage of manual experimentation (application and practice) to practice the experiences learned and represented the practical face of knowledge. The role of the teacher is to provide the necessary tools and materials and to allow learners to practice working with their hands to answer the question of how.

Fourth Stage: Tangible Material Experiences:

The learner integrates new knowledge with his own experiences and experiences to expand and develop his knowledge. He has moved to the stage of tangible material experience. This is achieved for the learner through exploration and examination

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of experiences in practice in new situations. The teacher should leave the opportunity for learners to discover the meaning of knowledge and concept by working and carrying out activities that answer the question of what if? These include verbal or practical engagement with others.

This step manifests itself in integration, celebration and closure; at this stage, the learner returns to where he started. The goal is to do things themselves and share what they have done with others. Teachers should encourage learners to teach, learn and share with others, create a healthy school environment, and allow them to share new learning. Learning is available to many pupils by sharing their writings and presenting their work through the school, and the learner evaluates the quality of the final product.

Accordingly, McCarthy has identified four patterns of learners that the teacher must be well aware of, illustrated in the following figure:

It is clear from the figure that the learners of the McCarthy model are divided according to the patterns of the imaginary learner: a learner characterized by his wide imagination» who uses his different senses to search for direct meanings of the educational experience. Always asks: Why? To recognize the values involved in any learning experience, he prefers to learn by listening, dialoguing and exchanging ideas.

Analytical learner: It is a learner who abstractly perceives the information and processes it through reflection» He also integrates his previous experiences with the topics he studies. The clear feature in his question: What?; He searches for synthesis and creativity activities and confronts his problems with logic and analysis.

The intuitive learner: He is a learner who always seeks to practice theoretical experiences; he is always asked the question: How?; to actively process information and employ what he has learned in his practical life.

Dynamic (active) learner: A learner who understands learning experiences by intuition.

## X. CONCLUSION

It is clear through the presentation of the previous theories that preparing the teacher for the practice of teaching and learning must stem from a theory through which the teacher can prepare a student who can keep pace with contemporary scientific and local changes. For this, it has become necessary to reconsider the roles of the teacher and the learner, as many theories have called for transferring the focus of attention from the teacher to the learner. And make the learner the determinant of the educational process. Previous theories have emphasized that learning must:

- 1- relate to the student's life, reality, needs and interests.
- 2- The student interacts and communicates with his peers, family and community members.
- 3- It is based on the student's abilities, speed of growth and the rhythm of his learning.
- 4- The student puts in the "centre" of the educational process.
- 5- It occurs in all places where the learner is active, school - home - laboratory - library - activity rooms.

In light of the above, it has become necessary for the contemporary teacher to prepare in a way that keeps pace with the modern view of learning» through the use of student-centred teaching strategies that suit his abilities, interests, learning styles and intelligence that he enjoys, as well as appropriate activities for that» and appropriate measurement tools..... and other elements of contemporary teacher preparation.

According to our review of several related studies, we see the importance of the format model in learning:

- 1) It helps to learn and understand the content and promotes successful communication, and this is one of the goals of this model.
- 2) Provides a more prosperous and efficient learning environment. It also motivates learners, raises mental abilities and thinking about what they are learning, and makes them more able to analyze the situations they are exposed to in the learning environment.
- 3) Works on the effectiveness of learning processes, increases confidence and motivation, improves performance and growth, and raises self-esteem and harmony.

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- 4) Activates the pillars of the learning process, starting from the content, learning techniques, teaching strategies and evaluation methods, taking into account social relations and linking the experience to the environment through content design.
- 5) It helps teachers or teachers to pay attention to several aspects, such as why the learner learns and not only what he knows and takes into account learning preferences, and this helps the mind to adapt and expand during application and practice.
- 7) Learning takes into account the employment of both sides of the brain through alternation between the right and left sides; the learner learns information in two ways, namely perception and processing.

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