

Qusay Hadi Darb, Dr. Ali Mohan Abbood. (2021). The Nature of Learning the Constructivist Learning Model in Teaching. *International Journal of Early Childhood Special Education (INT-JECSE)*, 13(2): 781-789. DOI: 10.9756/INT-JECSE/V13I2.211119

Received: 22.05.2021 Accepted: 24.08.2021

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The Nature of Learning the Constructivist Learning Model in Teaching

Abstract

The current research includes the constructivist learning model, in which the two researchers discussed what this model is in teaching. In their current research, the researchers dealt with its inception, the cognitive foundations of the constructivist learning model, the main foundations upon which the constructivist learning model is based, its objectives, advantages, and the problems encountering its use in Teaching, and its stages when teaching the subject's teachers in its steps, and then the researchers review a model for a teaching plan according to the constructivist learning model, and the researchers will present the important conclusions from this model, as well as some recommendations and references that were employed in this research.

Keywords: Constructivism, Teaching/learning, Approach.

Introduction

Constructivism appeared in education linked to the construction of knowledge and the structure of concepts, and therefore it was known as cognitive constructivism or conceptual constructivism in education, and the so-called constructivist curricula, constructivist education theories and constructivist methods in teaching, constructivist teacher and constructivist student appeared. (Hill, 1997).

From the viewpoint of constructivists, knowledge is a dynamic process of making meaning and understanding experiences rather than a process of passive reception from the outside world. Constructivists focus on the fact that each student must construct meanings from the world and ideas if he wants to be actually useful, and that we as students are strongly influenced by others through social interaction. And the knowledge that is gained from others is useful in understanding the world, in the extent that we make meaning for ourselves during the thinking process, and constructivism assumes that knowledge is a meaningful interpretation of the student's real experiences, and meaningful means that the interpretation is externally and internally determined by experience, which

makes it understandable. Perceived by the student, rather than being a picture of reality. (Yager, 1990).

The Emergence of the Constructivist Learning Model

This model was presented by (Troubridge and Bye) This model appears in the literature with various names, the teaching-learning model, or the constructivist approach model in education, and it was originally adapted from the learning cycle model that first appeared in 1962 in the United States of America by (Atkin and Karpels) and then (Karplus and others) introduced amendments in 1974, then it was modified and developed to its current image by (Susan Luxe and Horsley) 1990, and in this model the focus is on making the student the center of the educational process, which was modified and developed in its current form by it in 1990. (Marchenko, 1999).

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Cognitive bases of the Constructivist Learning Model

The constructivist learning in his cognitive philosophy is based on two main foundations represented in the previous experience where the student builds new knowledge through the cognitive experience that is present with him, builds it by receiving it from others, the student builds knowledge himself through the use of the mind, where cognitive meanings are formed as a result of interaction His senses with the external environment and adapting to it, as the basic function of knowledge is to adapt to the data and requirements of the external environment with which the student interacts, so building cognitive structures and schemes is a process of harmonization between cognitive structures and reality and not a process of symmetry or matching between them. (Yager, 1990). Features of teaching based on a structural analysis model.

The Main Principles on which the Constructivist Learning Model is Based

1. Planning by the teacher to invite students to participate effectively in implementing an activity, solving a specific problem, or discussing a particular phenomenon. This stage comes at the beginning of the new learning steps.
2. Relying on the concepts, perceptions and ideas of the students in discussing the questions posed to them and finding solutions to the problems they face while giving them the opportunity during learning to discuss and test their ideas and suggestions, even if they are incorrect because the occurrence of error is normal in the learning process, the constructivist teacher accepts Students' mistakes and then directs them and discusses them so that they can discover their mistakes and correct them on their own, and replace the correct concepts and ideas with the wrong concepts and ideas.
3. Giving the students the opportunity to work in groups in an atmosphere of cooperation and teamwork, and giving them enough time to carry out research, exploration and thinking, and to discuss the proposals, interpretations and conclusions reached regarding the problem or issue before them.
4. Asking questions that require deep thinking and deal with open-ended problems by encouraging and motivating students to research and explore and refer to various sources of information to find evidence and evidence that support

what they mention of answers, explanations and suggestions.

5. It is necessary to listen to the students' predictions and expectations for the results before they begin to solve and reach the answers.
6. The teacher must take into account the students' alternative perceptions and concepts, designing lessons in a way that challenges their misconceptions, while confusing those concepts. (Wicklein, 2005) Stages of teaching using.

Objectives of the Constructivist Learning Model

The constructivist learning model aims for students to learn new knowledge by building it themselves, and supports self-learning through the development of learning and research processes. Teaching with this model is done by going through four stages: the stage of advocacy (activation), the stage of exploration, discovery and innovation, the stage of proposing explanations and solutions Action stage. (Marchenko, 1999).

Advantages of the Constructivist Learning Model

1. The student is actually the center of the educational process, as he is the one who searches, experiments, and discovers until he reaches the result himself.
2. The student is trained to play the role of researchers and scientists, which develops a positive attitude towards science.
3. It gives the student the opportunity to practice the various science operations such as observations, conclusion, measurement, hypotheses and testing and other science operations.
4. It allows the student to discuss and dialogue with other students and with the teacher, which will give him a sound language of dialogue, and make him active and positive.
5. The model links science and reality, which provides an opportunity for students to see the importance of science in relation to the reality in which they live and to solve society's problems.
6. It gives students the opportunity to think of the largest possible number of solutions to a single problem, which makes the students in a state of constant thinking, which leads to the development of different thinking patterns among the students.

7. It provides the opportunity for students to correct misconceptions, through dialogue sessions they hold with the teacher.
 8. The work is done in groups, which develops the spirit of cooperation among the students, and work in the spirit of one team. (Hammam, Khalil, 2001).
- requires dividing students in the classroom into small work groups of (406) students, which is difficult if the class contains more than (30) students. (Required, 2002).

Problems Encountering the Use of the Constructivist Learning Model

1. Not all knowledge that can be constructed by students is like some types of approximate constructivist knowledge, which is difficult or impossible to develop through the model.
2. Cognitive complexity in learning tasks
The learning situation often includes a problem in which the student makes an effort to solve it, and the solution to the problem requires that the student possesses a knowledge background closely related to the problem, otherwise it will become for him a cognitively complex problem, and to overcome this problem the teacher must provide what he knows With mental scaffolding to cross the gap between what the student knows and what is called to know, and reduce the cognitive complexity involved in some learning tasks, these scaffolding come either from the teacher or one of his colleagues, or from a book or any other source of knowledge.
3. The problem of evaluation, where constructivists reject all traditional evaluation methods, such as evaluation of reference and criteria of the criterion, as this model did not provide an integrated and acceptable formula for evaluation that goes along with its philosophical and psychological framework.
4. The problem of social acceptance of the constructivist model in education. Parents and teachers primarily want an education that provides students with the basics of knowledge and transfers cultural heritage from one generation to another, which is not clear in the basics of the constructivist model in learning.
5. Teachers' resistance to the constructivist model of learning for many reasons, perhaps the most prominent of which is that they may not be qualified to keep pace with the new roles imposed on them by this new, which constitutes an obstacle to its application in school classrooms.
6. The density of classes in most of our schools is an obstacle to teaching using the model, as teaching with this model

Stages of the Constructivist Learning Model

The constructivist learning model runs according to four main sequential stages that are the main structure or construction of this model, which are: (the stage of invitation, the stage of exploration, discovery and innovation, the stage of proposing explanations and solutions, the stage of taking action, and the following is a presentation of these stages: (Maximus, 2003).

Invitation Stage

At this stage, students are invited to learn, where the teacher attracts the students' attention and arouses their interest to what he wants to present or present to them, whether it is a lesson or a specific problem he wants them to solve. This stage aims to arouse students' motivation for the lesson and prepare them for learning. The invitation process, through the teacher asking some questions or problems that may seem confusing to students or contradict their previous information and experiences, which invites students to reflect and think to answer these questions and solve those problems, the teacher may invite students to learn by drawing their attention to tangible things related to the lesson, and the more the problems are related to the students' lives, the more they respond to them and interact with them, and the invitation may be made from the experiences that the students themselves go through or by showing pictures or drawings of some problems or events that are intended to be studied, and taking into account that the questions and things presented Students at this stage must relate to their previous information and experiences, as this has a great impact on their response to these questions and problems and interaction with them. At the end of this stage, students should have felt the importance of the problem at hand. them and focused on it, as they must have become motivated to search for that problem.

The Stage of Exploration, Discovery and Innovation

At this stage, the students are divided into small, heterogeneous groups, and the students of each group begin to carry out the activities and tasks required of them, and here the students' abilities are challenged to reach answers to the questions included in those

activities, tasks or questions that they have during their search, exploration and experimentation, and in At this stage, each student in the group presents his or her ideas, suggestions and interpretations regarding the problem posed within his group. Opinions and ideas are exchanged and discussions are held among the group students in preparation for the general dialogue session with the teacher and the rest of the groups.

It is also necessary for all groups to perform the same activities and tasks. Rather, each group can have different activities and special questions. The groups in this case are called the activities community. In this case, the teacher must provide the basic experiences and activities for each group, and the role of the teacher is greatly reduced at this stage. But it is not isolated from group participation, rather it is a member of all groups, but its role is limited to guiding students only when needed during their implementation of activities and tasks and encouraging them to continue implementing the activities to reach solutions and conclusions. (Al-Najdi, et al., 2003).

The Stage of Suggesting Explanations and Solutions

At this stage, a general dialogue session is held between the teacher and the students. Each group presents through one of its members (the rapporteur) its solutions, conclusions and explanations regarding the questions and problems that were posed to it in the previous stage. At this stage, the teacher should listen well to the solutions provided by the groups. And ideas and suggestions, even if they are incorrect without diminishing the importance of those ideas or of the students who reached them, and after all the groups submit their findings, the teacher opens the door for discussion and dialogue about the conclusions and ideas presented by the groups, and gives the students the opportunity to justify their suggestions and conclusions and clarify the ways Which they followed to reach those conclusions, and the teacher at this stage should reinforce the correct ideas and conclusions, and help students through discussion, dialogue and directed questions to modify what they may have of incorrect ideas and concepts to be replaced by sound ideas and concepts. The important stages for the teacher, as they help him to identify some of the wrong ways and patterns of thinking that students may follow while carrying out activities and solving problems and problems. forms, and then can find appropriate ways to treat them. (Shehata, 2003).

Action Stage

This stage is considered as the evaluation stage, during which the teacher makes sure that the students understand the concepts and ideas included in the lesson, and the students at this stage can evaluate themselves, so that each student determines his weaknesses and strengths, and therefore tries to address his weaknesses, and at this stage, taking The procedure is to challenge the students' abilities by finding appropriate applications for what they have studied, and providing solutions to the problems presented to them as applications to the ideas and concepts of the lesson, where the students apply the ideas, conclusions and generalizations they reached in the lesson in other similar situations or in practical life applications through which the lesson is related to life And the possibility of employing it in solving scientific problems, and the teacher must give this stage importance and give students enough time to apply the concepts and ideas contained in the lesson. (Meade & Dugger, 2004), and Figure (3) shows a schematic diagram of the stages of the constructivist learning model.

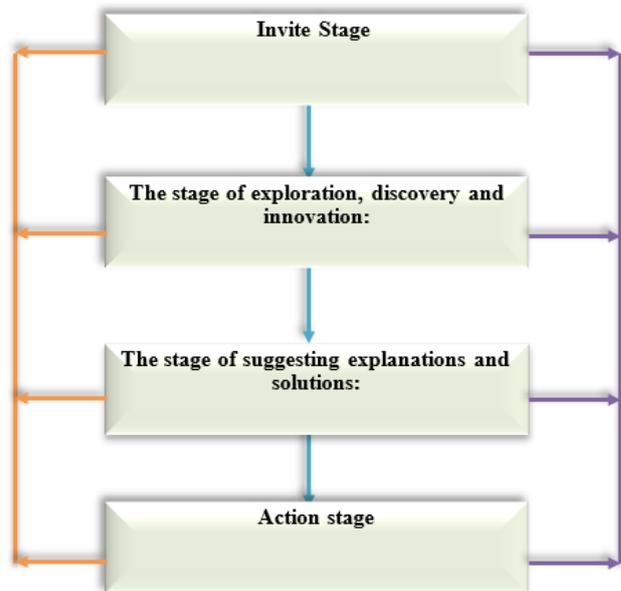


Figure 1.

The work of the researchers

{.....}}

A model plan for teaching according to the constructivist learning model.

The Specific Objective

At the end of the lesson, the students will be able to know the meaning of ministry in the successive Islamic eras.

Behavioral Objectives

To make the student able to:

1. Determines the era of the establishment of the ministry in the Arab Islamic state
2. Names the first minister of the Abbasid Caliphate Institution.
3. He knows the concept of ministry.
4. He cites any Quranic verse in which the term ministry is mentioned.
5. Enumerates the terms and powers of the minister.
6. Indicates the tasks performed by the delegated minister.
7. He writes an article on the reason for the establishment of the ministry institution in the Arab Islamic state.
8. He explains the reason for the failure of the ministry in the Abbasid state.
9. He gives his opinion on the role of Abu Salma al-Khalal al-Arabi as the Minister of the family of Muhammad (PBUH).
10. It shows the tasks of the eyebrow in the Abbasid era.
11. Explains the role of the Minister of Execution in the Abbasid state.

Teaching Aids

1. Historical photos.
2. Projectors (POWER POINT), Data show.
3. A diagram showing the ministry successively in the Arab Islamic state.

Presentation of the Lesson According to the Constructivist Learning Model

The first stage (the invitation or preoccupation).

Its aim is to attract the students' attention and involve them in the activity, by motivating them to the topic of the lesson (the new concept) and inviting them to integrate into learning it and start the lesson with a dialogue about the previous concepts, as follows:

Start by preparing the students mentally for the lesson through a quick review of the events of the previous lesson and linking the events of the new lesson with the events of the previous lesson so that the student is mentally prepared for the new lesson and receiving some new information, then start by asking them a number of questions, including:

1. Who are the Seljuks?
2. Who is the leader of the Seljuks?
3. What does this date 656 AH mean?
4. Who is the Abbasid Caliph who built a trench around Baghdad?

The second stage (Exploration stage)

This stage focuses on the student in particular, in which the students begin to work in activities trying to reach a solution to the problem.

1. Ask the students to carry out the activities according to the worksheet that they hand out to each of them
2. Ask the students to write down the results of the activities in preparation for the dialogue session.

My agency: I start presenting the lesson to the students, asking questions and asking the students to answer them. For the purpose of giving more information, I summarize the important points on the board, and the course of the lesson will be as follows:

The main points of the lesson:

1. The establishment and development of the Ministry.
2. The Ministry's powers and types.
3. The reasons for the appearance of the veil.

Use the following images to display the lesson.....



The Third Stage (The Stage of Explanations and Suggesting Solutions)

Students arrive at the required concepts by interpreting the results of the previous stage activities questions. The role of the teacher is to organize discussions, direct ideas and solutions among students and manage them in a

comfortable environment. Appreciate students' ideas and suggestions and participate in their answers to the questions of the first activity. The teacher works to reinforce the correct answers and correct the wrong ones.

After completing the clarification of the main points and writing them on the board, I start explaining and clarifying the lesson and directing questions to the students during the course of the lesson and asking them to answer each question.

Teacher: Do you know the concept of ministry?

Student: The derivation of the term "ministry" from "support," which is "assistant," because the minister, Aoun, the Caliph, bears the burdens of politics from him and returns to his opinion and advice

Teacher: In what era did the ministry system appear?

Student: The Abbasids officially created the position of minister, and Abu Salma al-Khalal was the one who assumed this position.

Teacher: Who is the first minister of the Mahdi?

The student: Abu Abdullah bin Muawiyah bin Yasar, the first minister of the Mahdi, who organized the financial affairs of the state in the best way, and also arranged the collection of tax.

Teacher: Who is the caliph who expanded the powers of the minister?

Student: Al-Rasheed was the first to expand the powers of the minister until he brought the state's facilities and institutions under his will and guidance

Teacher: When were the foundations of the ministry completed?

Student: In the first two years of the Abbasid rule and until the move to Samarra, the foundations of the ministry were integrated and its foundations were stable.

Teacher: Why did al-Mu'tasim move the capital from Baghdad to Samarra?

Student: Al-Mu'tasim's policy of relocating the capital affected the historical development of the institution of the ministry, especially after the domination of the Turks over the caliphs themselves.

Teacher: When did the ministry lose its power?

Student: After the caliphs fell under Turkish domination, the ministry lost its power.

Teacher: Why did senior ministers take advantage of their positions?

Student: The senior ministers took advantage of the weakness of the caliph's personality, so they dominated the state's administrative apparatus and sabotaged its finances. The position of the minister (Abu Furat) towards the Caliph al-Muqtadir could be an example of what we say.

Teacher: When was the ministry institution abolished?

Student: The ministry was abolished during the Buyid period, who appointed to the Caliph a clerk to manage his affairs.

Teacher: When did the ministry's institution return to work?

Student: The ministry has returned to its era in the time of the rule of the Seljuk period. The Seljuks kept the Abbasid minister alongside the Seljuk minister who had the actual authority in the administration.

Teacher: When did the ministry become more important?

Student: The importance of the ministry increased after the Caliph liberated him from Seljuk control, especially during the era of Caliph Al-Nasir li-Din Allah.

Teacher: What are the powers of the Minister of Delegation?

The Student

1. Issuing rulings in a manner consistent with the provisions of the tolerant Sharia.
2. He has the right to be appointed by princes over the provinces, to manage wars, and to head armies
3. The delegated minister has the authority to rule.
4. The minister is authorized by the caliph to exercise all the powers without reference to him and his authority is similar to that of the prime minister

Teacher: What are the conditions set by the jurists for those who hold the position of minister?

The Student

1. This cannot be done without a contract from the Caliph himself and in a legal form.
2. He should be aware of all his legal powers.

Teacher: Did the Minister of Execution have the same powers as the Minister of Delegation?

Student: The powers of the Minister of Execution were restricted and confined to the implementation of the orders of the Caliph and nothing else, and from this position he is a mediator between the people and the Caliph.

Teacher: When did the eyebrow function appear?

Student: It appeared in the Prophet's era, and it was voluntary. In the Umayyad era, its owner was responsible for blocking the head of the state from the people, and no one was

allowed to meet with him except at specific times.

Teacher: Yes, it appeared in the noble Prophet's era, and this function was established in the Abbasid era until we found historians listing the names of the veil among the lists of other state employees, and it was not limited to the Caliph's door only, but there was a veil for ministers and others for the judiciary.

The Fourth Stage: The Stage of Taking Action (The Expansion Stage)

This stage aims to expand and deepen the students' learning of the ideas, concepts, knowledge and skills that they have reached in the third stage by conducting an activity or activities related to the topic in question, i.e. moving the learning effect to new teaching-learning situations. The teacher distributes the activity questions, and asks the students to answer. They are reported individually and students are expected to explain.

My agencies: After the students finished answering the questions that were put to them and which I put on the board, I review with them what came in the historical source, which is a text from the Holy Qur'an showing the importance of the ministry.

Al-Mawardi mentions in his book *Al-Ahkam Al-Sultaniya* and the Religious States in the origin of the name of the ministry, which is different in its derivation and on three aspects.

As for Ibn Manzoor in his book *Lisan al-Arab*, he says about naming the minister in the hadith of al-Saqefa, Abu Bakr (may God be pleased with him) said to the Ansar, we are the princes and you are the ministers, a will with which to support the emir.

It is mentioned in the saying of Zaid bin Thabit Al-Ansari when he said: "We are the supporters of God and the ministers of His Messenger, we fight the people until they believe in God."

The word "vizir" was also used in the Prophet's covenant, as Ka'b bin Malik said in his poem on the day the Jews of Banu al-Nazir were expelled from Medina.

The next morning, the Messenger of God came to them, and he was seeing them

Ghassan Al-Hama, so support him against the enemies, and he is their minister

In the Umayyad era, the word of a minister was mentioned in the speech of al-Dahhak al-Hilali to Ibn al-Hadrami when he came to Basra, inciting the people and inciting them to depart from obedience to the Rightly-Guided Caliphate by saying:

As for those who trace the origin of this and the word to a Sassanid origin, there is a kind of accusation against the Arabs on the basis that

the word "wazir" is derived from the Persian word "fisher", which means judge, and it has been modified for ease of pronunciation to the word "vizier" with the view that the judge's job and mission do not fully apply to the duties of the minister, although this derivation had to be believed, so it was more appropriate for him to take on the position of a judge similar to it, and if we traced the designation of the word vizier in the Persian language, we would find that they call him (Barz Hafar Qadar), which means the one who keeps matters, and it is not related in terms of the pronunciation of the word vizier.

As for the system of the ministry, it is of Arabic origin and existed before Islam with different names from this word. It is narrated that this position exists in the Iraqi Arab state of Al-Mandhari, where the person in charge of the position of minister was called (Al-Raddafa) and he has the same functions as the minister, except that he is a substitute for Al-Hairy, i.e. on occasions and in his absence and he has a council Special to the right hand of the king, and because of the importance of this position, it is useful to mention the following narration: Nu'man Ibn Al-Mundhir, the king of Al-Hira, had in Al-Ridafa a person from Bani Yarbu' from Tamim whose inheritance was small from large. One day Al-Harith bin Biba bin Qurt bin Sha'ban Al-Dari wanted to have a second hand and tried to persuade the king to do so. As soon as they knew the Banu Yarbu' of this intrigue, a fierce war broke out between them that ended with the victory of the Banu Yarbu', who are the king's supporters, and called this incident a battle (Tafha).

Then ask what the noble Qur'anic texts that are in your hands include. Some of the answers will be answered and the correct answers will be reinforced and proven on the board. Then I ask them to show the new ideas contained in the historical sources, and then I ask them to compare what was stated in the course book they have scheduled about the ministry and what came in the historical sources.

The Fifth Stage: Evaluation

After completing the lesson presentation and clarification, I ask general questions to know the students' understanding of the lesson. These questions include:

1. What is the ministry?
2. Compare between the Minister of Delegation and the Minister of Implementation?
3. What are the powers of the minister?
4. How do you explain the weakness of the ministry in the Abbasid state?
5. Who cites any Quranic term in which the term ministry is mentioned?

6. What is the function of the eyebrow in the Abbasid state?

The Sixth Stage: Homework

Ask the students to prepare for the next lesson (summarizing what was mentioned in the historical sources).

Conclusions

In the light of the current research, the researchers reached the following conclusion:

1. Teaching according to the constructivist learning model focuses on making the student the focus of the educational process in the classroom, as he is the one who searches, experiments, and discovers until he reaches the result himself. academic achievement, which in turn improved their academic achievement.
2. Teaching with the constructivist learning model leads to learning new concepts, perceptions, and ideas for students, and contributes to the students' discussion of the questions they ask them, and finding solutions to the problems they face, while giving them the opportunity during learning to discuss and test their ideas and suggestions, even if it was incorrect, because the occurrence of error is normal in the learning process through the teacher accepting the students' mistakes and then directing them, and discussing them so that they can discover their mistakes and correct them themselves, which makes the teaching process an interesting process.
3. Teaching according to the constructivist learning model provides the opportunity for students to work in groups and in the spirit of one team, and in an atmosphere of cooperation, and to work in a team spirit. It requires the teacher to ask questions that require deep thinking and address open-ended problems through which students are encouraged and motivated, and research and refer to various sources, to find evidence and evidence that support what they mention of answers, explanations, and suggestions.
4. The researchers emphasized that teaching according to the constructivist learning model in which it is necessary to listen to the predictions and expectations of the students for the results, and they can reach the answers as it gives them the opportunity to correct some of their misconceptions during the dialogue

sessions they hold with the teacher, and give them enough time to carry out the research operations, exploration, and discussion of what was reached of proposals, interpretations, and conclusions.

5. Teaching according to the constructivist learning model provides an opportunity for students to practice the processes of observation and conclusion, by training them to play the role of researchers and scientists, which develops in them a positive attitude towards learning, and the opportunity to think about the largest possible number of solutions to a single problem, which makes them think continuously that leads to knowledge. Different patterns of correct scientific thinking, as well as discussion and dialogue among themselves and with the teacher, which gives the correct language of dialogue, and makes them active.

Recommendations

In light of the current research, the researchers recommend the following:

1. Directing male and female teachers at all educational levels to use modern teaching models, including the constructivist learning model.
2. The necessity of issuing a teacher's guide that includes modern teaching models in learning, and making educational supervisors and specialists a prominent role to see the foundations and steps of teaching these modern teaching models, including the constructivist learning model.
3. Adopting modern teaching models, including the constructivist learning model, when preparing curricula that are decided by the curricula preparation directorates.
4. Work to increase students' awareness and focus on teaching situations that stimulate intellectual ability by exposing them to educational situations and activate the ability to generate new creative ideas for students and add contexts that require the use of modern teaching models that employ and exploit their mental abilities, including the constructivist learning model.
5. Enriching textbooks with various situations and activities that contribute to the development of students' skills, and giving suggestions about working with the constructivist learning model to the General Directorate of Curricula in the Ministry of Education.

6. Teaching the constructivist learning model requires the teacher to provide a classroom environment characterized by an atmosphere of freedom and democracy without criticism of the ideas proposed by the students.
7. Organizing training, development, and qualifying courses by the Ministry of Education for male and female teachers during the service to train on the use of the constructivist learning model when teaching because of its importance in increasing students' academic achievement.
8. The necessity of providing appropriate opportunities for students to practice thinking by providing students with educational experiences related to their reality, and giving them sufficient time to reflect on them either through the curricula or modern teaching models, including the constructivist learning model used by the teacher, as well as providing classroom learning environments that help achieve these goals. educational goals.
9. Using various and multiple evaluation methods to accurately measure the outcomes of the educational learning process, and it works on monitoring students' learning, diagnosing their strengths, working to continuously enhance them, identifying areas of weakness and working to address them, and thus working to make appropriate decisions regarding students' cognitive levels, and not relying on the amount of information that the student possesses as an indicator of achieving educational goals when teaching them in the steps of the constructivist learning model.
10. Qualifying students to use modern teaching models, including the constructivist learning model, and including programs during their preparation period, allowing students to identify the methods of these models, and training them on how to teach the topics of any subject within their specialization according to this teaching model.

Acknowledgements

The authors would like to thank Mustansiriyah University. (<https://uomustansiriyah.edu.iq> Baghdad-Iraq) for its support in this work.

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