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Impact Of Aplton Instructional Model On The Achievement Of Students In The Department Of History In Geography Subject And Developing Thier Metacognitive Skills

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Abstract

The current research Investigated the impact of Using Aplton instructional model on the achievement in Geography and developing metacog nition skills for students in the Department of History. To achieve this aim, the researcher set two null hypotheses. The sample comprised (106) male and female students from 3rd year students in the Depto of History. Who were distributed randomly among two groups equivalent in some variables such as; age (in months), IQ test, pre- learning test, and metacognition skills scale. The researcher chose (54) male and female students randomly from group C to represent the experiment al group In the same way, she chose (52) students from group D to represent the control group. To achieve the aim of the research the researcher prepared two instruments the First one was an achievement t-test in Iraq Geography and the second was metacognition skills scale. At the end of the experiment, the researcher administered the two instruments up on the sample After analyzing olata, the findings show: 1- Statistical significant difference at (0.05) level of significance between the mean scores in achievement of student in the two groups and for the benefit of experimental. 2- Statistical significant difference at (0.05) level of significance between the mean scores a developing metacognition skills of students in the two groups and for the bench it of the experimented group. Accordingly, the researcher set number of recommendations such as:1-University lecturers should use Aplton model when teaching Geography in the departments of the collage of Humanities; as that model has positive impct in stlmulating students thinking and encouraging them to use the same model whem they will become teache vs in future and leave the traditional methods in teaching. 2-Curriculum designers in the universities and instructional institution's shlld be acquainted with fit information

about the importance of Aplton instructional model to take itto consideration when designing the curricula and syllabus. The researcher set number of. Suggestion's such as: -Conducting a same research, on other subject's and academic stages, using Aplton instructional model and of ther teaching models and testing it's impact on other dependent variables.

Impacto del modelo educativo de Aplton en el logro de los estudiantes del Departamento de Historia en Geografía Asignatura y desarrollo de habilidades metacognitivas Tgier

Resumen

La investigación actual investigó el impacto del uso del modelo de instrucción Aplton en el logro en Geografía y el desarrollo de habilidades de metacognición para los estudiantes del Departamento de Historia. Para lograr este objetivo, el investigador estableció dos hipótesis nulas. La muestra comprendió (106) estudiantes masculinos y femeninos de estudiantes de tercer año en el Depto of History. Quienes fueron distribuidos aleatoriamente entre dos grupos equivalentes en algunas variables como; edad (en meses), prueba de coeficiente intelectual, prueba previa al aprendizaje y escala de habilidades de metacognición. La investigadora eligió (54) estudiantes masculinos y femeninos al azar del grupo C para representar el grupo experimental. De la misma manera, eligió (52) estudiantes del grupo D para representar al grupo de control. Para lograr el objetivo de la investigación, el investigador preparó dos instrumentos. El primero fue una prueba t de logros en Geografía de Iraq y el segundo fue la escala de habilidades de metacognición. Al final del experimento, el investigador administró los dos instrumentos en la muestra. Después de analizar olata, los resultados muestran: 1- Diferencia estadística significativa al nivel de significancia (0.05) entre los puntajes promedio en el logro del estudiante en los dos grupos y en beneficio de experimental. 2- Diferencia estadística significativa al nivel de significancia (0.05) entre los puntajes promedio y el desarrollo de habilidades de metacognición de los estudiantes en los dos grupos y para el banco de pruebas del grupo experimentado. En consecuencia, el investigador estableció varias recomendaciones, tales como: 1-Los profesores universitarios deberían usar el modelo Aplton cuando enseñen Geografía en los departamentos del collage de Humanidades; ya que ese modelo tiene un impacto positivo en estimular a los estudiantes a

pensar y alentarlos a usar el mismo modelo, ya que se convertirán en maestros en el futuro y dejarán los métodos tradicionales en la enseñanza. Los diseñadores de planes de estudios 2 en las universidades y las instituciones educativas deben conocer información adecuada sobre la importancia del modelo de instrucción Aplton para tenerlo en cuenta al diseñar los planes de estudio y el plan de estudios. El investigador establece el número de. Sugerencias como: - Realizar una misma investigación, en otras asignaturas y etapas académicas, utilizando el modelo de instrucción de Aplton y de otros modelos de enseñanza y probando su impacto en otras variables dependientes.

Research problem:

A researcher believes that a university teaching profession needs a scientific knowledge based on continuous training and access to all that is modern in the field of modern teaching methods and educational strategies and models, where a teacher was able to manage an educational situation in a classroom and the participation of learners in the educational process and make them the main axis in it, and that The sense of his researcher about the difficulty experienced by his request for a history section in a geographical subject in Iraq and its effect on their low achievement in this subject and their lack of skill of skills beyond his knowledge, through her meeting with the subject teachers and his request and a strong desire to overcome these difficulties was a major motivation for this research. So, a research problem has become in the following question: What is the effect of using the Appleton educational model in obtaining his request for history in his geography and developing the skills beyond their knowledge?

research importance:

Good education is what drives learners to experiment and choose facts, especially we urgently need to reconsider our educational and educational reality and try to absorb it and direct its curricula in the direction of addressing our society's problems and upgrading it, as it must move from the framework of students 'preservation of information and facts to a real understanding of the goals that they learned from Its sake and how it will use and invest that knowledge when it is needed, as the job of educational institutions is to make

themselves a model environment to improve the values, ideals, information, facts, concepts and experiences they offer (Bakkar, 2011: 112-113).

As the main curriculum function is to prepare students for the future and this requires adopting teaching methods centered on the learner. Therefore, it is assumed that teachers choose opportunities for learning that are appropriate to the characteristics and needs of learners and support them to work in a cooperative manner that ensures direct contact with the lives of students and their experiences outside the school (Office of School Performance - New Zealand Education, 2016: 32).

Geography is of importance in acquiring knowledge, information, concepts, trends, skills and values of geography to make individual and group decisions about the use of environments and problem-solving, and the issue of employing teaching methods, strategies and teaching models is an important necessity and one of the elements of their teaching (Al-Asadi and Muhammad, 2015: 29-35). One such example is the Ableton model, which is part of a constructivist theory that makes the learner the focus of the educational process and makes it more effective (Sandra & Other, 2010P: 55).

The constructivist theory is based on several ideas, including building the knowledge that the learner's mind performs and that the perspective of things is the same, but his experiences are responsible for the different interpretations of individuals and their views of things (Zaytoun, 27: 2006).

As the constructive environment is flexible, it is concerned with learning with the meaning in which activities are real, working to develop skills for solving problems and group work by encouraging learners for each other and the role of the mentor and mentor teacher that provides learners with opportunities to test their understanding of what surrounds them (Zaytoun and Kamal, 2003: 157- 158). During the lesson, this model is based on four stages:

The first: sorting the ideas in the learner's possession, in which the ideas that the learner possesses are checked before starting to present the new content and facts, that is, we take a comprehensive view of the learner's vision of the world around him and how to interpret

it and deal with it, because by doing this it activates the learner's memory to search for the best A good idea to explain the new situation. (Yassin and Zeinab, 2012: 152-153).

The second: information processing: in which the learner's knowledge plans are activated and their components are analyzed, in which he chooses the best and most suitable for use in building the meaning of the new information and takes several images such as: representation and alignment to acquire knowledge, and for processing two types deep and superficial (Al-Arrash, 2013: 53).

Third: Hints and indicators of information: It helps learners to reach full answers to any confusing situation through exploration and investigation, as this stage highlights the role of the teacher in the encouragement that develops the capabilities of a learner in research and exploration (Attia, 2015: 346-348).

Fourth: the societal context: that is, the learner is bound by a social context as articles for the lesson and are verbal or ideas that have passed on the learner or attract his attention to a phenomenon in a particular educational situation (Zayer et al., 2014: 419).

And there must be skills that guide these cognitive processes during learning, including skills beyond knowledge, as they work to monitor activities and the subsequent organization and the harmony of these processes in their relationship with a cognitive purpose related to it and usually this is through a goal (Jaber, 1999: 329)

As the learner plans, monitors, controls, and educates himself, this matter helps him to acquire different science processes related to a subject as these skills extend his awareness and ability to think (Hacke, 1999: 35).

A good learner is one who possesses metacognitive skills and often uses them to believe that it is a specific strategy that is more likely to reach success than others (Al-Harthy, 2007: 51).

These skills improve the performance of learners with low academic achievement, and to develop and gain them a positive impact on educational products in the field of teaching and work to eliminate individual differences between learners (Al-Hazon, 2009: 12).

These skills are among the most important components of intelligent behavior in information processing and grow with age and experi-

ence and have a role in controlling all thinking activities (Jarwan, 1999: 44).

Each skill includes:

1- Planning: It is the organization and taking steps towards accomplishing the task and testing the necessary strategy, which includes setting goals and implementation in a sequential manner, as well as guessing the potential difficulties during implementation and forecasting the outputs (Al-Ahmadi, 2012: 13).

2- The evaluation: It is estimated progress in the processes of achieving goals and strategies, addressing difficulties and planning (Abdel Hamid, 1999: 329).

3- Monitoring, control and control: in which attention is paid to the goal, organizing the sequence of ideas, maintaining the sequence of steps and processes, determining the time to complete the task, and identifying difficulties that hinder the completion of the mission and work to address and overcome it (Matouq, 2011: 16).

Based on the foregoing, you see that the importance of this research is reflected in:

- According to the researcher's knowledge, this research, with its independent and dependent variables, was not previously discussed in my teaching geography.
- The importance of targeting a sample of his request from the Department of History at the College of Education for the Humanities, as there is an urgent need for a study aimed at developing university teaching, especially as it prepares its students within an academic program to be future teachers.
- The development of metacognition skills among history department students in the above mentioned college during their preparation and the extent of their use of them helps to qualify those skills they have directly and essentially.

Research objective:

The current research aims to identify the effect of using the Appleton educational model in the achievement of history department students in geography and developing their metacognitive skills.

research assumes:

- There is no statistically significant difference at the level of signif-

icance (0.05) between the average achievement levels of his application, a pilot group that was studied using the Ableton educational model, and the average achievement score of his request, a control group that was studied in a regular way.
- There is no statistically significant difference at the level of significance (0,05) between the average achievement levels of his request a experimental group that was studied using the Ableton educational model and the average achievement score of his request a control group that studied in a regular way in developing metacognitive skills.
Search occurrence:
Restrict the current search to:
Third graders in the Department of History at the College of Education for Humanities at Mosul University for the academic year (2018-2019)
- First semester of an academic year (2018-2019)
The three chapters of Iraq Geography include: the geographical location of Iraq and its importance - the surface - the climate.
Defining terms:
The researcher defined the following terms:
1- Appleton educational model introduced by:-
(1997) Appletone

- Al-Ahdal (2012) states that ((a teaching model based on the existence of cognitive scaffolding and finding a relationship between theorizing and practice among learners and teachers and between learners themselves, which makes it more effective in teaching)) (Al-Ahdal, 2012: 1097-1100).
His researcher defined him procedurally as: the procedures and steps that a geographic subject teacher employed in Iraq in the educational position of the third grade students in the history section related to geographic issues in Iraq makes students stand on what they have ideas to enable them to process information according to their previous experiences by offering a confusing situation or a scientific problem and helping them In searching and searching for information to reach the correct results and answers, which leads him to cre-

ate scaffolding for the lesson, which is either verbal or ideas passed on to the learner.

2- Collection: Presented by:

Al-Shammari (2003) stated that "(the amount of knowledge of what the learner possessed in a specific subject subject according to specific goals and in a specific time period)" (Al-Shammari, 2003: 324).

And the researcher knew him procedurally that he had absorbed the third grade students in the Department of History because they studied topics in geography, which is expressed through the total score obtained by each male and female student in the test prepared by the researcher to measure achievement.

3- A geographical item known to each of:

Al-Taiti (2002) is ((a branch of social studies that challenges research in the Earth's crust with its natural and human phenomena, to include research in the vital environment in which a person lives and its great impact on the relationship of human interaction with its environment and its direct and indirect impact on it)) (Al-Taiti, 2002: 28).

The researcher defined her procedurally as the facts, concepts, information and skills that are included in the first three chapters, which include the geographical location of Iraq, its importance, and its surface and climate manifestations.

4- Skills beyond knowledge:

Everyone knew it:

Ibrahim (2004) as ((planning, monitoring and evaluating the performance of a learner in solving scientific problems, which are executive skills whose mission is to guide and manage thinking in facing any confusing situation, and it is considered one of the basics of smart performance)) (Ibrahim, 2004: 8-9).

- Lavie (2012) as ((methods that elevate the thinking skills of the learners and lead to their positivity in learning, which makes it more aware of the readable texts and their meanings and ideas and the ability to evaluate these texts and logically reorganiz them according to the learner's vision)) (Lavi, 2012: 71) . The researcher defined her

procedurally as mental skills that enabled the third grade student in the Department of History to be aware of his thinking and his ability to self-assess perception through his understanding of declarative knowledge and procedural and police knowledge and his ability to plan, control, control and evaluation, which helps to understand any mental or performance task, and is measured by the total degree that The student gets it after answering the meta-cognitive skills test that the researcher prepared.

Previous studies and their discussion:

The first axis: studies dealing with the Ableton educational model

1- Al-Ahdal Study (2012):

This study aimed to know the effect of using the Appleton model in constructive analysis on the development of creative thinking and achievement in geography for secondary school students in Jeddah Governorate in the Kingdom of Saudi Arabia. The study sample consisted of (100) female students distributed to (51) students as an experimental group and (49) A student as a control group, as the control group studied in the usual way and the experimental group in the Ableton model, and the researcher prepared two tools, the first is an achievement test and the second is the creative thinking test and the researcher used the t-test for two different samples as the results showed that there are statistically significant differences The average score for female students in the achievement test and the creative thinking test is in favor of the experimental group (Al-Ahl, 2012: 1091).

2- (Ahmed Study 2014):

This study aimed to know the effect of the Appleton model on the achievement of the subject of sociology and critical thinking among students of the fourth literary grade. This study was conducted in Baghdad, where the study sample consisted of (71) female students (36) female students as an experimental group and (53) as a control group as the group studied Experimental using the Appleton model and the control group in the usual way. The researcher prepared two tools: the first is an achievement test of a multiple choice type and the second is a critical thinking test and using the T-test. The results showed the presence of statistically significant differences at the lev-

el (0,05) between the average degrees The two groups are in th test Hesela and testing of critical thinking in favor of the experimental group (Ahmed 2014: g-h).

3- The Lami and Ali Study (2017):

This study aimed to know the effect of the Appleton model on acquiring grammatical concepts among students of a fourth scientific class. This study was conducted in Basra, Iraq. A sample of this study consisted of (68) students, (34) students as an experimental group, and (34) students as a control group, as a group studied Experimental with Appleton model and control group in the usual way. The researchers prepared a test to acquire grammatical concepts and the researchers used the T-test for two independent samples. The results showed that there was a statistically significant difference at the level of significance (0,05) between the average scores of the experimental and control group students in the test of acquiring grammatical concepts and for the benefit of the group Pilot (Al-Lami and Ali, 2017: 423).

The focus of the second studies deals with skills beyond knowledge

1- Study Al-Shujiri and Alaa (2014):

The study aimed to know the effect of the similarities strategy in achievement and the skills beyond knowledge of students of a fourth scientific class in an Islamic education subject. This study was conducted in Iraq, the same sample consisted of (56) students distributed equally to (28) students as an experimental group and another like an officer, Two researchers prepared two tools: the first achievement test and the second: developed a measure of skills beyond knowledge and after applying an experiment and ending it with a T-test, the results showed that there was a statistically significant difference at the level of significance (0,05) between the average scores of students of two groups in the achievement test and scale Skills beyond Knowledge and for a Experimental Group (Al-Shujairy and Alaa, 201 4: 747-748).

2- Sweden and Haidar Study (2015):

This study aimed to know the effect of electronic learning on the achievement and development of skills beyond knowledge when applying to a third stage in the curricula and teaching methods sub-

ject, this study was conducted in Iraq, a sample of (70) male and female students was distributed to two groups with (37) students and a student as an experimental group And (33) students and students as a control group, two researchers prepared two tools: the first is an achievement test and the second is a measure of skills beyond knowledge and after applying and completing an experiment, the results showed a statistically significant difference at the level of significance (0,05) between the average degrees of his request in an achievement test and a measure of skills Beyond his knowledge and in favor of an experimental group (Suwaidan and Haydar, 2015: 358-369).

3- Al Mamouri Study (2016):

This study aimed to know the effect of a loud thinking strategy in obtaining and developing skills beyond knowledge in a history course for first-graders middle class, this study was conducted in Iraq, a sample consisted of (64) students distributed equally to (32) as a pilot group and likewise a control group , Prepared two tools: the first is an achievement test and the second is a measure of skills beyond knowledge and after applying and completing the experiment, the results showed that there is a statistically significant difference at the level of significance (0,05) between the average scores of his request in an achievement test and a measure of skills beyond knowledge for the benefit of an experimental group (Al-Mamouri, 2016: 291).

Indications and indications from previous studies:

1- Goals:

All studies focused on the first axis to identify the effect of the Appleton model on a number of dependent variables (creative thinking, achievement, critical thinking, acquisition of concepts). As for the second axis, they all addressed skills beyond knowledge as a dependent variable. As for current research, it will aim to know the effect of using the Appleton model in obtaining and developing skills beyond its knowledge.

2- Academic stage:

Studies in the first axis relied on (the second secondary, the fourth literary, the fourth scientific) and the second axis (the fourth scientific, the second stage in the faculty of education, the first intermediate). As for the current research, it will be based on his request for a third grade in the history section of the College of Education for the Humanities.

3- Research tools:

Studies were used in the first axis (achievement test, creative thinking test, critical thinking test, grammar acquisition test). As for the second axis, he used in his studies: (achievement test, a measure of skills beyond his knowledge). As for current research, it will use an achievement test and a test of skills beyond its knowledge.

Search procedures:

First: experimental design:

His researcher adopted an experimental design with two experimental and equivalent groups and two pre- and post-tests, as in the following form:

Figure No. (1)

Groups Pre-test Derived variable In depend variable

Experimental developing metacog nition skills Aplton model

-the collection

-developing metacog nition skills

Control Normal way

Second: Research Society:

The research community is represented by the third grade students in the Department of History in the College of Education for Humanities at the University of Mosul, and they are (250) male and female students distributed among (5) people for the academic year (2018-2019)

Third: The research sample:

A sample was chosen from the research community consisting of (106) male and female students divided into two divisions (C and D). They were chosen in a simple random method, as Division (C)

consisting of (54) male and female students became a experimental group and division (D) made up of (52) As a student, he demanded him as an officer group.

Fourth: Equivalence of two research groups:

For the purpose of controlling some variables that affect a variable that follows this research, his researcher sought to set the following variables (age, intelligence, skills beyond knowledge, previous knowledge test), as data was collected on the age of the students's time by requesting a researcher from his request to mention their births in detail either as for For the variable of intelligence, the researcher applied Raven Al-Muqunn's test to the Iraqi environment on (10/15/2018) (Al-Dabbagh and others 1983: 21-31). With regard to metacognition skills, the researcher applied a measure that I prepared on the research sample on (16/10/28) As for the previous knowledge test, the researcher prepared for this purpose a test in the geographical issues of Iraq, a test for Mu My multiple choice type consisting of (30) items was applied to the research sample on (10/19/2018) before starting the experiment to ensure that the students in the two groups have started with one line of initiation. Both the arithmetic mean and the standard deviation of the students 'grades in both groups were calculated and when Each of the valence variables, using a T-test for two independent samples, included results in the following table:

Table (1) (t-test)

T-test results for two independent samples of valence variables

Variables Experimental for54 Control for 52 T.

Calculated

Average calculation Standard deviation Average calculation Standard deviation

Age 298,518 6,94925 297,153 6,42417 1,049

Intelligence

94,351 4,8531 94,365 8,6976 0,010

Previous collection 20,555 3,6064 20,769 3,1412 0,325

developing metacog nition skills 30,796 3,9781 29,288 4,5041 1,829

It is noticed that the calculated values of (T) are less than the value

of the tabular T at the level of significance (0.05) and a free degree (104) This means that there is no statistically significant difference between the mean scores of his request in the two groups of research when each of the equivalence variables specified in a table This indicates the equivalence of students of two groups and that they are on the same project line before teaching.

Fifth: Research Requirements:

1- Determining the scientific subject that will be taught during the application of an experiment, as three first chapters of the vocabulary of Iraq were determined for the third grade in the Department of History at the College of Education for Humanities for the academic year (2018-2019)

2- Formulating behavioral purposes where his researcher prepared (51) behavioral purposes by relying on Bloom classification in a cognitive field and the four levels were adopted (remember-understand-apply-analysis) due to the nature of the article, and it was presented to a group of arbitrators in a geographical specialty And teaching methods to make sure its apparent sincerity and take their observations.

3- Writing the teaching plans, and the plans for the subject included in the research experience were prepared at a rate of (2 plans) per week as it is devoted to teaching geography for the third grade, as the plans were prepared according to the Ableton model and the usual way and the number of plans became (40) for both groups and by (20) plans for the experimental group And (20) plans for the control group, and were presented to a panel of arbitrators for the purpose of ascertaining their validity.

4- Research tool:

A- Achievement test, where the researcher prepared an objective achievement test for the subject covered in the application of the experiment, as the test consisted of (51) paragraphs of a multiple choice type, and the veracity of the apparent test was verified by presenting it to the jury committee, where the researcher approved (80%) to judge The validity of the test items, and all items obtained this percentage.

- Distinguishing power and difficulty coefficient where the researcher extracted the distinguishing force and difficulty coefficient of the test items by applying it to an exploratory sample other than the basic research sample, represented by two students (A, B) who number (99) students from the third grade students from the same department and college, which are considered to be The research community has corrected the test by giving one degree for the correct answer and zero for the wrong and abandoned answer. The scores of the sample members were arranged in descending order (27%) of the forms with the highest degrees to represent a higher group and (27%) of the forms with the lowest degrees were chosen to represent a minimum group, and accepted paragraphs T-strength is distinguished by AA Z of (.20).

Its difficulty coefficient is between (0,20-0,80)

Accordingly, no paragraph was deleted to provide the above conditionsStability of the test: Stability means that if the same conditions, categories, sample and time are available, we will obtain the same information in case of re-research (Solomon, 2014: 248).

To ensure the consistency of the test, the Koder Richardson-20 equation was used to calculate the stability of the instrument after applying it to a sample other than the basic research sample consisting of (45) students and his (E) students requested him to request a third row in the history section, which is considered from the research community on (10/19/2018) The stability coefficient reached (0,82), which is a high persistence coefficient, and such values are acceptable for tests of this type, and thus the test is ready for application.

B- Test the skills beyond knowledge, where the researcher prepared a measure of skills beyond knowledge, after having examined a number of measures including the study of Al-Ahdal (2012), Ahmed (2014), Al-Lami and Ali (2017), and the study of the cashier (2017), as the scale is From (3) the positions of each position consisting of (3) article paragraphs, each paragraph measures a field of knowledge (planning, knowledge, control, and evaluation) and (15) objective paragraphs of a type of multiple-test three alternatives distributed among the skills beyond knowledge on (3) Fields of knowledge fields mentioned above, at a rate of (5,5,5) for each field, thus the

number of paragraphs (54) paragraphs has become.
- Sincerity of a test in order to verify the sincerity of a test whose researcher relied on the apparent sincerity of the test, that is, a test link with the aspects that they measure within their concept of skills beyond his knowledge as well as his association with a geographical specialization, and therefore the test was presented to a number of arbitrators with specialists to judge the validity of its paragraphs, and has There was an agreement of 80% using this test, thereby achieving apparent validity (Al-Rashidi, 2000: 167).
- The discriminatory power for the purpose of calculating the coefficients of excellence for the paragraphs of the metacognitive skills test. The researcher applied the test to an exploratory sample other than the basic research sample, represented by the two students (A, B) who number (99) students, and his student from his third grade students from the Department of History, which is considered a society. The research, after correcting the students 'responses by giving two degrees to the essay paragraph and one to the objective paragraph, and accordingly, the total score for the test became (63), then the grades were arranged in descending order and took a percentage (27%) of the upper and lower classes, and then the researcher applied the two equations of excellence to the article and subject paragraphs, which ranged General Do not distinguish between (0.31-0.78) and these percentages are considered acceptable (Aziz, 2005: 305).
- The stability of the test to impose the calculation of the stability of the metacognition skills test, the researcher applied the equation (Alpha - Kronbach) to the responses of the students of the exploratory sample the same sample of excellence (99) male and female students, because the test contains article and article paragraphs at the same time, where the coefficient of stability (0, 84), where a good stability coefficient is considered (Melhem, 2000: 265), and thus the test is ready for application.
Sixth: Implementing the experiment:
Starting the implementation of an experiment in the first semester on (10/22/2018) and teaching continued for both groups until (4/1/2019), as students studied an experimental group using the Ap-

pleton model according to prepared plans and the students of an officer group studied using the usual method agreed upon with a teacher This subject was done under the supervision and follow-up of his researcher every week. After the end of the teaching period, the achievement test was applied, and the skills beyond his knowledge (post-test) were applied for two consecutive days (7-8 / 1/2019).

Seventh: Statistical Methods:

The researcher used the following statistical methods in analyzing the research data:

1- The t-test of two independent samples to ensure parity between two research groups and to test the significance of a difference between the achievement test scores and the pre- and post-test for metacognitive skills and for calculating the discriminatory strength of the metacognition skills test (Wackner, 2013: 60).

2- Difficulty coefficient for calculating the difficulty of the achievement test items (Odeh, 1998: 288-290).

3- Distinction equation for extracting the discriminatory power of achievement test passages (Kwaveh, 2010: 150).

4- Equder Richardson-20 equation to find the reliability of the achievement test (Allam, 2000: 162).

5- Al-Faker and Nabakh equation to find the stability of the metacognition skills test (Odeh, 1998: 350).

Presenting and discussing the results:

1- The results of the first hypothesis, which states:

- "There is no statistically significant difference at the level of significance (0.05) between the average score of the students of the experimental group that was studied using the Appleton model and the average score of the students of the control group that studied in the usual way", and using the T-test (st) for two samples Two independent studies show that the calculated T value is 8,596, which is greater than the tabular T value of (1,985) at the level of significance (0.05) and freedom degree (104), as shown in Table (1):

Table (1)

Results of using the T-test for the difference between the mean achievement of the two research groups

grop Number student Average calculation Standard deviation Value-t sign
Calculated tabular
Experimental 54 37,555 5,0382
8,596
1,985
Control 52 26,932 7,5012
Accordingly, it rejects the null hypothesis and accepts the alternative that says there is a statistically significant difference between the mean levels of achievement of the experimental group and the control and in favor of the experimental group that was studied using the Appleton model.

The researcher attributes this superiority to the effect of the Appleton model, which emphasizes the positive and effective role of the learner as it is based on the principle of activities and achieving integration and overlap between the previous and subsequent information as it works to establish educational scaffolds between the teacher and the student and the students themselves, as this model is based on organized scientific steps that make the learner with Ability to search and search for information and make him use his mental abilities in analysis, interpretation and conclusion and employs everything he learns in his daily life as he diagnoses the ideas in his possession and sorted them before presenting the content and this is considered the cornerstone of the effective and self-learner Meh learner is based largely on what is owned by the learner information earlier this study are consistent with a study Ahdal (2012) and the study of Ahmad (2014) and the study of al-Lami and Ali (2017).

- The results of the second hypothesis, which states, "There is no statistically significant difference at the level of significance (0.05) between the average scores of students of the experimental group that was studied using the Appleton model and the average score of the students of the control group that were studied in the usual way in developing metacognitive skills", Using the T-et test for two independent samples, it was found that the calculated T value was equal to (162.12), which is greater than the tabular T value of (1,985) at the level of significance (0.05) and degree of freedom

(104), as shown in table (2)

Table (2)

The results of using the T-test for the difference between the average scores of the two research groups in developing metacognitive skills grop Number student Average calculation Standard deviation Value-t sign

calculated tabular

Experimental 54 12,240 4,0837

12,162

1,985

Control 52 1,500 4,9803

Therefore, it rejects the null hypothesis and accepts the alternative, which says that there is a statistically significant difference between the mean scores of the experimental group and the control group in developing the skills of metacognition and in favor of the experimental group and the control group in developing the skills of metacognition and in favor of the experimental group that was studied using the Appleton model.

The researcher attributes this to the effect of the Appleton model in providing an effective educational environment by making the student aware of the knowledge and information his knowledge possesses on the subject of the lesson, which helped him to develop his skills beyond knowledge, as she worked to help the student in planning how to obtain the information And linking it with what he has of previous information, monitoring what is on his mind, evaluating all his ideas, whether old or modern, and reviewing them in all their aspects. This study is consistent with the study of Al-Shujairi and Alaa (2014), the study of Suwaidan and Haidar (2015) and the study of Al-Mamouri (2016).الاستنتاجات

In light of the research results, the researcher reached the following conclusions:

1- The effectiveness of the Appleton educational model in increasing the achievement of the third grade students in the Department of History at the College of Education for Humanities in a geography course in Iraq. Compared to the usual way.

2- The effectiveness of the Appleton educational model in develop-

ing skills beyond knowledge in the usual way.

Recommendations

In light of the research results, the researcher recommends the following:

1- The necessity of the interest of teaching faculties of education and basic education and institutes for the preparation of teachers for the Appleton model and its use in teaching the subjects prescribed for all departments, and avoiding the usual methods of teaching

2 - The need to include centers for continuing education in Iraqi universities as the Appleton model and other teaching models within its program in qualifying new teachers in service.

3- Providing curriculum developers in universities and educational institutions with sufficient and clear information about the importance of the Ableton educational model to take into account the design and planning of curricula and curricula.

4- Including the curriculum courses in colleges of education, including geography courses, on activities that help students use metacognitive skills.

The proposals

To complement the current research, the researcher suggests conducting the following studies:

1- The effect of using the Appleton model in developing metacognitive skills in other academic stages.

2- The effect of using the Appleton model on developing pivotal, complex and critical thinking.

3- The effect of using ATONE and other teaching models, such as the McCarthy, ClausMairo and Rigloth model, on variables of tendencies, attitudes, exam anxiety, and social intelligence.

4- Conducting similar studies for the current research and for other subjects as history, psychology and teaching methods.

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