GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ)
ISSN (E): 2347-6915
Vol. 12, Issue 2, February (2024)

THE IMPACT OF THE COGNITIVE LEARNING CYCLE STRATEGY ACCORDING TO BLOOM'S TAXONOMY AND ITS REFLECTION ON DEVELOPING THE THEORETICAL TEACHING METHODS COURSE FOR SECOND STAGE STUDENTS

[1] Asst. Prof. Dr. Hazem ALI CHazee
[1] College of Physical Education and Sport Sciences, University of Al-Qadisiyah
Hazem.ghazee@qu.edu.iq

ABSTRACT

The aim of the study is to investigate the impact of the cognitive learning cycle strategy on cognition, based on each phase of the cycle (exploration phase, concept introduction phase, concept application phase, and concept evaluation phase). The study combines learning strategies and metacognitive strategies to enhance awareness and critical thinking among the study sample. The significance of the study lies in providing students with the opportunity to rely on their own prior knowledge and retrieve it when applying the educational curriculum prepared by the researcher. The curriculum includes diverse teaching units based on the curriculum content. The researcher constructed a cognitive achievement scale for the theoretical teaching methods course, consisting of 57 items. The study population consisted of second-year students at the College of Physical Education and Sports Sciences, University of Al-Qadisiyah, for the academic year 2022-2023. The study sample included 40 students, divided into control and experimental groups. The study lasted for ten weeks, with one teaching unit per week. After implementing the educational curriculum, a cognitive achievement test was administered to the study sample within the classrooms. The results were collected for statistical analysis.

Keywords. Cognitive learning cycle strategy, cognitive achievement, theoretical teaching methods course.

INTRODUCTION

In our contemporary world, humans have witnessed tremendous development in various aspects of life. This has had an impact on the search for modern teaching strategies and methods that meet the needs and aspirations of students in the learning process. The ongoing development is a reflection of the cognitive explosion in various fields of knowledge. Therefore, progress is closely linked to all these advancements, especially in the field of teaching methods, which serve as the foundation for the learning process.

The past decade has witnessed significant scientific transformations, leading to a global community that resembles a small village. Any society that does not keep up with other communities becomes isolated. Due to the increasing interest in education and learning processes, numerous strategies have emerged that focus on teaching and explaining the mechanisms of learning and cognitive growth. One of these strategies is the metacognitive learning cycle, which is considered one of the prominent strategies that can be used in teaching physical education and sports science, particularly in the subject of theoretical teaching methods.

This strategy places the learner at the center of the educational process, encouraging them to explore, experiment, and discover. It also provides opportunities for students to engage in discussions with the teacher. Teaching according to this strategy makes the learner active and effective, working genuinely to find the required solutions by using cognitive and mental ideas. This approach integrates students' knowledge and experiences, moving away from traditional learning methods and relying on modern scientific methods based on research and experimentation.

The importance of this study lies in understanding the impact of the metacognitive strategy on the subject of theoretical teaching methods for second-stage students in the College of Physical Education and Sports Science, according to Bloom's taxonomy levels. The problem of the study revolves around the fact that the researcher, who teaches the subject of teaching methods, wanted to find a strategy that directly affects the use of students' ideas during the learning process, moving away from traditional methods that may lower students' levels. Additionally, the burden falls solely on the teacher to explain and clarify, and the student becomes a passive recipient without participating with the teacher. Therefore, the researcher aimed to use the metacognitive strategy according to Bloom's taxonomy levels for the knowledge levels of the subject of theoretical teaching methods for second-stage students.

The current study aimed to identify the impact of using the metacognitive learning cycle strategy according to Bloom's taxonomy levels on the subject of theoretical teaching methods for second-stage students in the College of Physical Education and Sports Science at Al-Qadisiyah University. It also aimed to develop a scale to measure the cognitive achievement of the subject of theoretical teaching methods in the second stage.

The study assumed that the metacognitive learning cycle strategy, according to Bloom's taxonomy levels, has a positive impact on learning the subject of theoretical teaching methods for second-stage students.

METHODOLOGY

The researcher used the experimental method with a design of two equivalent experimental and control groups, with a pre-test and a post-test, to suit the nature of the problem to be solved. The methodology should be in line with the nature of the problem to be solved. The scientific research methodologies have diversified, allowing the researcher to select the methodology that suits the problem.

Study Population and Sample:

The study population consisted of second-stage students in the College of Physical Education and Sports Science at Al-Qadisiyah University for the academic year 2022-2023, totaling 132 students. The study sample was selected using simple random sampling and consisted of two classes (Group C and Group D), with a total of 40 students. Group C was taught using the traditional method by the subject teacher without the researcher's intervention, while Group D was taught using the metacognitive learning cycle strategy according to Bloom's cognitive levels.

Used Tests:

The researcher prepared a multiple-choice test according to Bloom's taxonomy levels, consisting of 57 items. The test was administered to the study sample after determining the content of the theoretical teaching methods subject according to the curriculum.

Specification of the Theoretical Teaching Methods Subject:

The theoretical teaching methods subject for second-stage students in the College of Physical Education and Sports Science was specified for the second semester according to the approved curriculum by the sectoral body for physical education and sports science colleges. It includes teaching methods, instruction, and planning. After reviewing the content of each chapter, the researcher formulated 57 behavioral objectives in the field of the metacognitive learning cycle according to Bloom's five cognitive levels (remembering, understanding, applying, analyzing, and creating), as shown in Table 1.

Table (1) Shows the behavioral objectives and their number for the subject of theoretical teaching methods.

N.	Behavioral Objectives	Number of Goals
1.	Remember (Knowledge)	15
2.	Understand (Comprehension)	13
3.	Apply (Application)	10
4.	Analyze (Analysis)	12
5.	Synthesize (Synthesis)	7

Cognitive Achievement Scale:

The researcher constructed the cognitive achievement test for the study sample in order to compare the level of development achieved by the study sample during the teaching period of the Teaching Methods course for second-stage students in both groups. The researcher prepared and formulated test questions for the cognitive achievement test for the theoretical Teaching Methods course in order to cover all the essential aspects of the subject that will be taught to second-stage students of the College of Physical Education and Sports Sciences at Al-Qadisiyah University. After reviewing several scales, the scale items were formulated according to Bloom's five levels and presented to experts and specialists in the field of teaching methods. The researcher relied on the curriculum taught to them in formulating the items. Table 2 shows the cognitive achievement scale in its final format. It should be noted that the researcher followed all the steps in constructing the scale, as indicated by Wajeehah Mahjoub, which include determining the sample for constructing the scale, determining the domains of the scale, formulating items for each domain of the scale, applying these items to a representative sample of the population, and then conducting statistical analysis of the items to select the appropriate ones for measuring the intended phenomenon (2:163).

Table (2) Shows the items of the cognitive achievement scale for the theoretical Teaching Methods course in its final format.

N.	Items	The alternatives for the answer are:	
1.	The behavioral objective should include	A- Describing the minimum acceptable performance level.	
		B- Describing the subject matter.	
		C- Describing the behavior that the teacher should achieve.	
		D- Describing phrases that indicate the achievement of the goal.	
2.	The purposes of behavioral objectives for learners	A- Formulating the purpose in the form of a question.	
		B- Including phrases with multiple behavioral goals.	
		C- Focusing the purpose on the learning outcome rather than the learning process itself.	
		D- Diversifying the purposes to include only the skill aspect.	
3.	Physical exercises are divided into	A- Regular and corrective exercises.	
		B- Corrective and adaptive exercises.	
		C- Regular, corrective, and creative exercises.	
		D- Regular, corrective, and adaptive exercises.	
4.	From basic (original) positions	A- Standing.	
		B- Hanging.	
		C- Lying down.	
		D- All of the above.	
5.	Exercises are divided by purpose	A- General basic exercises.	
		B- Fitness exercises.	
		C- Exercises for recreational purposes.	
		D- Exercises for body correction purposes.	
6.	It is one of the most important and common primary positions	A- Sitting.	
		B- Bending.	
		C- Standing.	
		D- Lying down.	
7.	The imperative style is characterized by the teacher taking	A- Planning decisions.	
		B- Implementation decisions.	
		C- Planning, implementation, and evaluation decisions.	
		D- Implementation and evaluation decisions.	
8.	The training style is similar to the imperative style in	A- Planning and implementation decisions.	
		B- Implementation and evaluation decisions.	
		C- Planning and evaluation decisions.	
		D- Evaluation, implementation, and planning decisions.	
9.	The goals of the interactive style are	A- Objectives related to the subject matter and objectives related to the role of learners.	
		B- Objectives related to the role of the teacher.	
		C- Objectives related to the subject matter.	
		D- Objectives related to the role of learners.	
10.	Among the goals of the discovery style	A- Engaging the teacher in the exploration process.	
		B- Engaging the student in the exploration process.	
		C- Engaging both the teacher and the student in the exploration process.	
		D- Developing creativity in the teacher.	
11.	The waiting time for physical exercise commands is short	A- If the students are young.	
		B- If they are slow learners.	
		C- If the exercise requires repetition.	
		D- If the exercise is new and they are inexperienced.	
12.		A- The movement should be slow.	

	The channels of growth for the emotional aspect of the discovery style are	B- The movement should be limited. C- The movement should be to the maximum extent based on each student's success. D- There should be no emotional involvement from the student.	
13.	He is responsible for implementation decisions in the discovery style	A- The teacher. B- Both the teacher and the student. C- The student. D- The student as an observer and performer.	
14.	When students stand in a square formation with a missing side to explain the skill, the teacher should consider the sun to be	A- Sunlight facing the formation. B- Sunlight reflecting the formation. C- Sunlight and wind direction facing the formation. D- Sunlight does not need to be considered.	
15.	The teacher engages in problem-solving in the discovery style	A- Asking a question and the student searches for the answer. B- Asking a question with alternative answers. C- Asking a question and the student searches for the answer with the help of their peers. D- Asking a question and the teacher answers it at the same time.	
16.	The purpose of self-examination style is	A- The student learns how to observe their peers. B- The student seeks the teacher's evaluation of their performance. C- The student seeks feedback from their close classmates. D- The student learns how to observe their own achievements.	
17.	The concept of individual differences among students	A- The level of each individual. B- The purpose of each individual. C- The previous experiences of each individual. D- All of the above.	
18.	One of the factors for the success of the lesson plan is	A- The teaching method used by the teacher. B- The instructional material. C- Allocating time for each section of the lesson. D- All of the above.	
19.	It is a style that relies on the teacher encouraging students through their involvement in the educational process	A- Indirect teaching method. B- Enthusiastic teaching method. C- Direct teaching method. D- Interactive teaching method.	
20.	Diversity and repetition of questions for students should be	A- Related to academic achievement. B- Related to skill development. C- Related to behavioral objectives. D- Related to emotional growth.	
21.	The classroom interaction strategy works on	A- Increasing the role of the teacher. B- Increasing the role of both the teacher and the student. C- Increasing the role of the student in the learning and teaching process. D- Increasing the teacher's experience.	
22.	The teacher explains the educational material in	A- Preparatory section. B- Main section. C- Preparatory section. D- Final section.	

23.	The conditions of the news section	A- Rushing when giving instructions.	
		B- Being too complex.	
		C- Starting with the command and then mentioning the action.	
		D- Mentioning the body parts that will perform the movement first.	
24.	It is a strategy that connects the role of the teacher with the effectiveness of the learners	A- Strategy centered around the teacher.	
		B- Strategy centered around the students together with the teacher.	
		C- Strategy centered around the student only.	
		D- Strategy centered around the subject matter and the teacher.	
25.	The lesson plan performs essential functions which are	A- Organizing and arranging ideas.	
		B- Organizing the teacher's experience.	
		C- Providing feedback to the student.	
		D- Providing feedback to both the teacher and the student.	
26.	The plan that includes more than one educational skill is called	A- Multiple plan	
		B- Single plan	
		C- Expanded plan	
		D- Diverse plan	
27.	The order of writing the movement in physical exercise is	A- Movement member + movement type + direction + timing	
		B- Movement type + movement member + direction + timing	
		C- Direction + movement type + timing + movement member	
		D- Movement type + timing + direction + movement member	
28.	One of the basics that help in the success of teaching	A- Objectives	
		B- Behaviors	
		C- Formations and configurations	
		D- Diversity	
29.	The teacher decides in the annual plan what he will do during the academic year to include	A- Curriculum implementation	
		B- Classroom activities	
		C- Extracurricular activities	
		D- All of the above	
30.	They are important teaching skills that a physical education teacher uses to present information to students	A- Interaction skill	
		B- Presentation skill	
		C- Guiding skill	
		D- Transition skill	
31.	One of the methods of stimulus variation	A- Auditory diversity and focus	
		B- Visual diversity and focus	
		C- Kinesthetic diversity and focus	
		D- Kinesthetic diversity	
32.	One of the advantages of a diverse plan	A- More tendency towards practical activity	
		B- Clear behavioral objective	
		C- Most often achieves the lesson objective	
		D- Provides an opportunity for the teacher to discover students' abilities	
33.	One of the disadvantages of the directive approach	A- Does not encourage cooperation	
		B- Contributes to the student's creativity process	
		C- Considers individual differences among students	
		D- Gives the student a chance to make decisions	

34.	The decision-making structure in the reciprocal approach is	A- Teacher and student performer	
		B- Teacher and student observer	
		C- Teacher and student performer and observer	
		D- Student performer and observer	
35.	Students in the brainstorming session are divided into	A- Triangular or quadrangular groups	
		B- Individual separate individuals	
		C- In pairs	
		D- All of the above	
36.	One of the characteristics of feedback	A- Counseling	
		B- Reinforcement	
		C- Organizational	
		D- Interactive	
37.	The teaching process goes through three sequential stages	A- Planning, evaluation, implementation	
		B- Implementation, planning, evaluation	
		C- Planning, implementation, evaluation	
		D- Evaluation, planning, implementation	
38.	One of the teaching skills that a teacher possesses	A- Teaching objective formulation skill	
		B- Verbal reinforcement skill	
		C- Non-verbal renforcement skill	
		D- Questioning skill	
39.	The stages of the learning process during the lesson go through sequential stages	A- Retention, acquisition, retrieval	
		B- Retrieval, retention, acquisition	
		C- Acquisition, retention, retrieval	
		D- Retention, acquisition	
40.	When organizing the content of the curriculum, three things are considered sequentially	A- Integration, sequence, continuity	
		B- Sequence, continuity, integration	
		C- Continuity, integration	
		D- Sequence, continuity	
41.	One of the things to consider when choosing the educational activity is	A- Overall physical and mental needs of students	
		B- Overall material needs of students	
		C- Overall environmental needs of students	
		D- Overall emotional needs of students	
42.	Direct teaching methods focus on	A- Teacher and student	
		B- Teacher	
		C- Teacher and school administration	
		D- Teacher and sports activity	
43.	Direct teaching creates an organized learning environment through	A- Focus on monitoring one student over another	
		B- Focus on specific academic goals	
		C- Focus only on delivering the material	
		D- Focus on organizational goals	
44.	Lesson planning decisions include a set of decisions about how to deliver and perform the skill and include	A- Use planning decisions and adhere to them	
		B- Perform the lesson according to the teacher's abilities	
		C- Plan without practical implementation	
		D- Direct planning and implementation	
45.	The role of the teacher in lesson implementation in the reciprocal approach is	A- Clarify the role of the observing student	
		B- Clarify the role of the executing student	
		C- Clarify the role of the observing and executing student	
		D- All of the above	
46.	The self-approach develops better awareness in the learner through	A- Sensory perception	
		B- Sensory psychological perception	
		C- Psychological motor perception	
		D- Sensory motor perception	
47.		A- Monitoring homework performance	

	When students start implementing assignments, the self approach uses the assignment sheet to show the role of the teacher	B- Having another student observe a classmate's performance	
		C- Student monitoring of their performance at the end of the assignment	
		D- All of the above	
48.	Teaching should be viewed as a unit that includes	A- Objective and content	
		B- Objective and method	
		C- Objective, method, and style	
		D- Objective, content, and method	
49.	The introductory part (introduction) of physical education lesson should achieve	A- Creating an educational situation	
		B- Achieving the emotional aspect in students	
		C- Learning strategic aspects	
		D- Calming parts of the body	
50.	A method associated with the use of rewards and punishments	A- Feedback-based teaching method	
		B- Teaching method based on praise and criticism	
		C- Teaching method based on using student ideas	
		D- Self-method	

N.	Items	True	False
51.	One of the conditions of the directive is that it should be in a loud voice more than required.		
52.	The informative section of the directive must be clear and uncomplicated.		
53.	The guided discovery approach is a self-directed, inquiry-based learning, but it is supervised and controlled by the teacher.		
54.	The physical exercise directive consists of the procedural and informative sections.		
55.	It is not acceptable to have any (pause) in the letters of the procedural section, nor is it permissible to divide the procedural section.		
56.	The period should be longer than necessary so that students do not forget what was mentioned in the informative section.		
57.	The organization in the training approach should be in a student-centered manner, with one (working) and the other (observing), and the role of the working student is to accomplish the task and make the given decisions, as in the interactive approach.		

Pre-test:

The researcher conducted the pre-test for the control and experimental groups using the cognitive learning cycle strategy based on Bloom's taxonomy for the vocabulary of the teaching methods subject in the classrooms of the College of Physical Education and Sports Sciences / Al-Qadisiyah University on Tuesday, February 21, 2023, after explaining the method of answering the test items to the study sample.

Educational curriculum:

After conducting the pre-test, the researcher implemented the educational curriculum, which consisted of 12 instructional units for a period of ten weeks, with one instructional unit per week for both the control and experimental groups, starting from March 2 to May 16, 2023. The researcher ensured that the application of the cognitive achievement scale was at the end of the second semester to ensure that the research sample had a good cognitive aspect. Prior to implementing the educational curriculum, two introductory units were implemented to explain the phases of the cognitive learning cycle strategy. The control group followed the

method and approach used by the subject teacher, while the experimental group followed the curriculum prepared by the researcher, which was based on the cognitive learning cycle strategy. The curriculum included teaching units on direct and indirect teaching methods, the application method of each method, planning, preparation, implementation, and evaluation decisions, as well as the growth channels for each skill, social, emotional, and cognitive aspects. It also included the concept of instruction and its general rule and conditions, as well as its three divisions (news, period, procedural). Additionally, it included the concept of physical education lesson plan and its preparatory, main, and concluding sections, with an explanation and clarification of the components of each section, the method of dividing the lesson time into sections, and knowledge of how to write a weekly, monthly, or yearly lesson plan and its content, which includes behavioral objectives and organization and evaluation according to Bloom's taxonomy, as it is the most common and widely used classification in determining educational objectives (3:18). The curriculum was presented to a group of experts in the field of teaching methods for the purpose of obtaining their opinions and suggestions that serve the research topic.

Post-test:

After completing the educational curriculum, the researcher conducted the post-test on May 20, 2023, for both the control and experimental groups, while ensuring that the test followed the same procedure as the pre-test and followed the same steps.

Statistical methods:

The statistical package (SPSS) was used to extract the study results.

RESULTS

Table (3) shows the mean scores, standard deviations, and t-value for testing the cognitive levels of Bloom's taxonomy before and after the intervention for the control group.

Cognitive Levels Bloom's Taxonomy	Assessment Unit	Pre-test		Post-test		Calculated t-value	Significance
		S	M	S	M		
Knowledge Level	Score	2.343	0.978	6.438	0.804	8.657	Significant
Understanding Level	Score	2.718	0.823	4.860	0.889	8.687	Significant
Application Level	Score	3.345	0,187	5.244	0.654	9.398	Significant
Analysis Level	Score	3.546	0.290	5.303	0.795	10.278	Significant
Evaluation Level	Score	2.672	0.754	4.497	0.811	9.208	Significant

Table (4) Shows the means, standard deviations, and the value of (t) for the pretest and posttest of Bloom's cognitive levels for the experimental group.

Cognitive Levels Bloom's Taxonomy	Assessment Unit	Pre-test		Post-test		Calculated t-value	Significance
		S	M	S	M		
Knowledge Level	Score	3.633	0.712	7.435	0.865	18.354	Significant
Understanding Level	Score	4.121	0.722	9.167	0.989	17.301	Significant
Application Level	Score	3.457	0.951	8.698	1.008	13.303	Significant
Analysis Level	Score	3.389	0.879	9.800	1,120	11.987	Significant
Evaluation Level	Score	4.356	0.911	6.314	0.972	15.304	Significant

Table (5) Illustrates the means, standard deviations, and the value of (t) for the posttest of Bloom's cognitive levels for the two study groups.

Cognitive Levels Bloom's Taxonomy	Assessment Unit	Control Group		Experimental Group		Calculated t-value	Significance
		S	M	S	M		
Knowledge Level	Score	6.438	0.804	7.435	0.865	6.346	Significant
Understanding Level	Score	4.860	0.889	9.167	0.989	6.327	Significant
Application Level	Score	5.244	0.654	8.698	1.008	5.919	Significant
Analysis Level	Score	5.303	0.795	9.800	1.120	5.818	Significant
Evaluation Level	Score	4.497	0.811	6.314	0.972	5.266	Significant

In light of the data extracted from tables (3, 4, 5) for the control and experimental groups, by comparing the means, standard deviations, and the value of (t), it indicates the presence of significant differences between the two groups and the superiority of the experimental group that used the cognitive learning cycle strategy based on Bloom's five levels according to the educational stages included in the curriculum for the theoretical teaching methods subject taught by the teacher. Mahmoud Dawood indicates that the teacher seeks to provide his students with the educational experiences and skills that he finds suitable for them, and he evaluates their levels of achievement according to specific tests aimed at assessing the students' ability to recall the information presented to them (4:154).

DISCUSSION OF THE RESULTS

From the results obtained from the pre and post-tests of the study sample, we notice improvement in both the control and experimental groups, but the experimental group outperformed the control group in the post-test. The researcher attributes this to the educational method that used the cognitive learning cycle strategy based on Bloom's five levels of cognitive achievement. The instructional units during the theoretical lecture of the teaching methods subject included various stages that encompassed the strategies of the cognitive

learning cycle. For example, the exploration stage allows the learner to search and investigate the correct answers by referring to their prior memory without relying on the teacher. The learner relies on themselves in this stage based on their existing knowledge, which stimulates their thinking and leads them to answers. Then they move on to the concept stage, which allows the student to internally connect and think in order to form instructional sentences about the topic presented by the teacher for discussion. Sufficient time is given for recalling previous information with the possibility of modifying it through rephrasing, summarizing, or explaining, along with providing relevant examples for discussion. Then they move on to the application stage by applying what they have retrieved in the previous exploration and concept stages to a new situation in the lesson, using teaching aids such as writing on the board, drawing, or solving exercises. After that, they move on to the evaluation stage, where the teacher evaluates their progress based on the previous stages of the cognitive learning cycle strategy, in order to make decisions based on the specified criteria for the purpose of issuing a judgment and defending it through discussion with the teacher. The researcher believes that one of the reasons that led to this development in the study sample is the nature of the strategy, as students resort to expressing what is going on in their minds when asked questions, which enhances their awareness of the cognitive aspect. Najah Shalash indicates that "educational programs help the player or learner to recognize the level of maturity they have reached in order to be able to organize the educational situations that lead them to the correct results. They are also able to identify the reasons for the mistakes they make when acquiring the skill, and appropriate training for maturity means effective training that achieves the correct results. Otherwise, it will be a waste of time and effort" (5:118). Furthermore, raising new questions about the aspects of learning in the teaching methods subject encouraged students to think beyond knowledge, which distinguished the sample individuals who learned using the cognitive learning cycle strategy as it allows the teacher and the learner to express their thoughts collaboratively and discuss them, with a focus on training learners on the nature of questions using the stages of the strategy. Nizar Al-Nafakh states that "examining the content of the test is a precise and regular examination in order to determine whether it includes a representative sample of the field of the subject being measured" (6:135). The researcher also believes that the reason for the superiority of the experimental group is that the cognitive learning cycle strategy helped in organizing the study material in the students' memory during the lecture, which helped them in the mental analysis of the theoretical material. This, in turn, facilitates the process of recalling and retrieving cognitive information when needed. Additionally, the researcher believes that the strategy contributed to overcoming boredom, as it makes the student try to access information in a different way by relying on the educational frameworks in the curriculum, which are sequentially organized. This made the students continuously engaged during the teaching process, making the lesson more exciting and stimulating self-directed and purposeful activity from the learners' side. In contrast, the control group relied on learning according to the traditional method followed by the teacher, which distinguished the individuals of both groups through the results that appeared in the cognitive achievement, which relied on Bloom's levels and the students' ability to refer to previous experiences in order to form an answer. It is worth mentioning that achievement tests aim to improve both learning and teaching more than

determining grades, and the importance of that lies in better understanding the students' learning in order to improve teaching methods, objectives, or content (7:58).

CONCLUSIONS

1. The use of the cognitive learning cycle strategy based on Bloom's five levels had an impact on the development of the experimental group.
2. The educational curriculum prepared by the researcher using the cognitive learning cycle strategy had a positive impact on the cognitive achievement of the experimental group compared to the control group.

RECOMMENDATIONS

1. Emphasize the use of the cognitive learning cycle strategy based on Bloom's five levels during the application of the teaching methods curriculum for students.
2. The necessity of developing educational curricula based on cognitive teaching strategies to give students the opportunity to think and research without relying on the teacher.

REFERENCES

1. Al-Shawk, Nuri Ibrahim, & Al-Kubaisi, Rafi Saleh. (2004). Research Guide for Writing Research in Physical Education. Baghdad, B.M.
2. Othman, Afaf. (2008). Teaching Strategies in Physical Education (1st ed.). Alexandria: Dar Al-Wafa for Printing and Publishing.
3. Al-Ajili, Sabah Hussein, & others. (2001). Principles of Educational Measurement and Evaluation. Baghdad: Al-Dabbagh Printing Office.
4. Al-Rubaie, Mahmoud Dawood, & Amin, Saeed Saleh Hamad. (2011). Teaching Methods in Physical Education and Their Techniques. Beirut: Dar Al-Kutub Al-Ilmiyah.
5. Shalash, Najah Mahdi. (2011). Learning and Motor Development of Motor Skills (1st ed.). Baghdad: Al-Ek for Design and Printing.
6. Al-Nafakh, Nizar Hussein, & others. (2016). Cognitive Tests in the Sports Field Between Theory and Application. Najaf: Dar Al-Diaa for Printing and Design.
7. Al-Nabhani, Musa. (2004). Fundamentals of Measurement in Behavioral Sciences. Jordan: Dar Al-Shorouk.