

The effect of the seven-course learning strategy (7E'S) on the cognitive speed and accuracy of defensive performance in volleyball for female students

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Abstract

The article aimed to prepare educational units according to the strategy of the seven-year learning cycle (7E'S), and to identify the effect of the strategy of the seven-year learning cycle (7E'S) on the cognitive speed and accuracy of defensive performance in volleyball for female students. Volleyball is one of the sports shown inside the educational plans of colleges of physical education that it has difficult skills and movements, and given that this game requires good skill performance, we, as teachers, must use modern strategies to learn its skill and bring learners to the degree of mastery, including the seven-cycle learning strategy that is compatible with those defensive skills that enable us to achieve a good form of the learning process, and the mental aspect is (Cognitive speed) is one of the main requirements in all sports, including volleyball, because it enables learners to perform skill accuracy in a manner consistent with the requirements of ideal performance.

The exploratory methodology was used with an exploratory plan with a single group design. The article not entirely settled by the third-year female understudies in the School of Actual Training and Sports Sciences at the College of Babylon for the scholastic year 2021-2022, who numbered (30) understudies. Then, at that point, an example of (24) female understudies was picked, after which the fundamental examination was applied. According to the chosen exploratory plan, the cognitive speed test and the accuracy tests of defensive performance in volleyball were chosen and applied, after which the educational curriculum was applied with (12) educational units, then the pre-test was conducted and all the educational units were applied, after which the post-test was conducted and appropriate statistical methods were used, and the article concluded To the conclusions and recommendations, the most important of which were the following:

The seven-course learning strategy has a positive effect on the cognitive speed and accuracy of defensive performance in volleyball for female students. The seven-year learning cycle strategy has a major role in encouraging female students to participate in the learning and teaching process by asking questions and inquiries about skills.

The recommendations were:

- Adopting the strategy of the role of seven-point learning in developing cognitive speed and accuracy of defensive performance in volleyball.

Keywords: Seven-course, learning strategy and accuracy.

Introduction

The progress and development taking place in the physical education lesson is due to the discovery of modern strategies, methods and techniques in it, which have had a positive impact on the development of its outcomes, which are in the interest of the learners because it includes diversity in the use of different teaching methods that differ from the previous traditional methods. The use of the seven-cycle learning strategy in teaching is considered one of the best modern strategies that is compatible with all levels, especially for college students, through which great educational goals can be achieved by applying its contents.

Volleyball is one of the sports shown inside the educational programs of colleges of physical education, which has difficult skills and movements. Given the good skill performance this game requires, we, as teachers, must use modern strategies to learn its skill and bring learners to the degree of mastery, including the seven-course learning cycle strategy that is appropriate. With these defensive skills that enable us to access the learning process well, the mental aspect (cognitive speed) is one of the main requirements in all sports, including volleyball, as it enables learners to perform skill-accurately in a manner consistent with the requirements of ideal performance.¹

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The importance of the current study is due to identifying the effect of the seven-course learning cycle strategy on the cognitive speed and accuracy of defensive performance in volleyball for female students.

Article problem

Through the article's experience in the field of teaching and volleyball, he found that using the seven-course learning cycle strategy in the lesson is of great importance. It is possible to take into account female learners, especially in volleyball, on the one hand, and on the other hand, that this strategy will constitute a scientific addition to the volleyball lesson, especially in the accuracy of defensive performance and in the category A task such as the students' lesson. Today we urgently need to expand the students' awareness through this seven-stage strategy that emphasizes excitement, exploration, expansion, and finally evaluation for the purpose of faster learning and involving the students in the educational process through inquiries and questions directed from the students to the teacher for the purpose of understanding the details of the skills being articleed. And overcome mistakes. Therefore, the article decided to use this strategy and the possibility of applying it with the intention of obtaining better results in the field of volleyball.

Article objectives

1. Preparing educational units according to the strategy of the seven-year learning cycle (7E'S).
2. Identify the effect of the seven-course learning strategy (7E'S) on the cognitive speed and accuracy of defensive performance in volleyball for female students.

Article hypothesis

- There is an effect of the seven-course learning strategy (7E'S) on the cognitive speed and accuracy of defensive performance in volleyball for female students.

Article areas

- Human field: Third-year female students in the College of Physical Education and Sports Sciences - University of Babylon for the academic year 2021-2022.
- Time frame: from 10/15/2022 until 1/10/2022.
- Spatial field: The indoor sports hall in the College of Physical Education and Sports Sciences at the University of Babylon.

Article Methodology

The article used the experimental method with an exploratory plan for one group.

The article population and its sample

Still up in the air continuously year female understudies in the School of Actual Training and Sports Sciences at the College of Babylon for the scholarly year 2021-2022, who number (30) understudies. Then, at that point, an example of (25) female understudies were picked to apply the technique to them as indicated by the exploratory plan of a gathering one.

Devices, tools and methods used in article

- Volleyballs (15).
- Volleyball court.
- Dell 5040 calculator (1).
- Signs.
- Office supplies (paper + pens).
- The questionnaire.
- Scientific sources.
- Tests and standards.

Field article procedures

1. Choosing a cognitive speed test: The article relied on the cognitive speed test that was built by Afrah Baqir Abdel Jalil ² and in order to apply it to the article sample, the article presented it to a group of experts and specialists (see Appendix 1) For the purpose of determining its validity, it was accepted with a percentage of agreement (100%).
 - Description of the cognitive speed test:
 - Test name: - Cognitive speed test.
 - The aim of the test: measuring cognitive speed.

- Tools used: - An obstacle-free arena 9 x 9 m, a box containing colored cones and numbered from (1) to (6), (12) colored cones (6 of which are numbered, and the other (6) are colored and unnumbered so as not to The tested student is able to memorize numbers while taking the test, a stopwatch (2), and a registration form.
- Test specifications: - The test consists of a group of squares with a number inside each one (serial numbers 1-6) distributed randomly on an obstacle-free square (*) (9 x 9) metres. The student connects the colored and numbered cones located at the starting line to the same the square that holds the same for the estimated time for each attempt, and then the tested student gets back to the beginning line to complete the rest of the cones and distribute them among the squares.
- Registration method: -
 - One point is given for each correct attempt lasting (4) seconds.
 - Two (2) marks are given for each attempt lasting (3) seconds.
 - (3) marks are given for each attempt whose time is (2) seconds or less, up to fractions of a second.
 - The endeavor that doesn't consent to the guidelines will be erased.
 - An attempt whose time exceeds (4) oseconds will be erased.
- Correction: - The score is the sum of the scores obtained by the test subject in the six attempts according to the time spent in the application for each attempt in seconds, as shown in Figure (1).

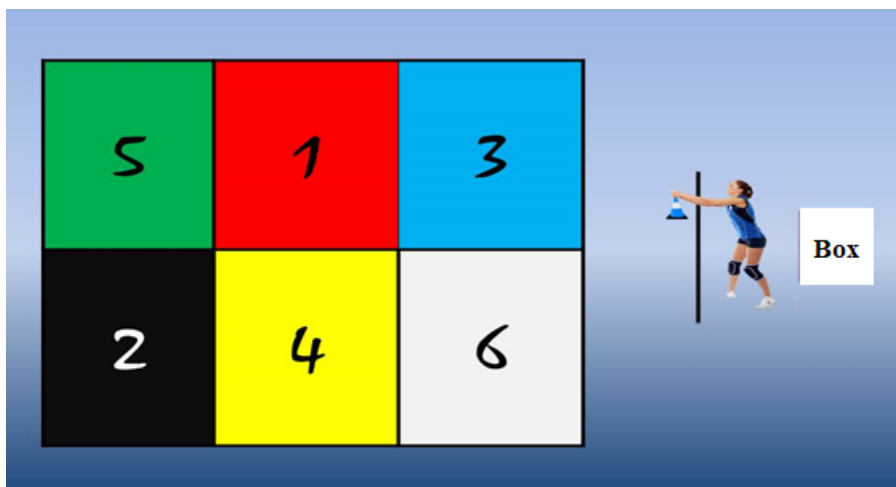


Figure 1. Shows a volleyball cognitive speed test

Determining accuracy tests for defensive performance in volleyball

The defensive performance accuracy test was chosen (accuracy of receiving the serve from below, accuracy of the defensive blocking wall, accuracy of defending the court from the back area), and its tests were determined based on sources and previous article because they were applied to a sample of female students.

1. Description of defensive performance accuracy:
 - A. Testing to evaluate the accuracy of receiving transmissions from below (1)
 - B. Test to evaluate the accuracy of the defensive blocking wall (2).
 - C. A test to evaluate the accuracy of defending the field from the back area (3).

Exploratory experience

The exploratory experiment was conducted on (6) female understudies, at precisely ten AM on 10/10/2021. Cognitive speed and accuracy of defensive performance were measured by the arbitrators, and after (7) had passed, the test was repeated under the same conditions for implementing the first test.

Scientific foundations

1. First: Honesty: (Content honesty) was used in the article after presenting the cognitive speed test to experts and specialists, as “content honesty is considered one of the most usable types of honesty.”³
2. Second: Reliability: It is “that the test gives the same results if it is re-applied to the same individuals under the same conditions.”⁴ Accordingly, the test’s reliability coefficient was found by testing and yet again testing on the exploratory example, as it was led on 10/27/2021 and was finished. It was rehashed on 12/14/2022 on similar example and in comparable circumstances, and the reliability coefficient for all tests was high if the test for cognitive speed reached (0.90), for the test for the accuracy of receiving transmissions from below (0.88), for the test for the accuracy of the defensive blocking wall (0.90), and for the test for the accuracy of defending the field. From the back area (0.89).

3. Third: Objectivity: “It is the test in which no discrepancy occurs between the opinions of the arbitrators if more than one arbitrator arbitrates the individual tested.”⁵ Connection was utilized between the authorities' outcomes, and it turned out to be obvious from the outcomes that the test is exceptionally unbiased.

Pre-tests

The example was coordinated and appropriated to the unit timings and their names were recorded on 10/28/2021, in participation with the subject educator to make sense of the test systems.

Implementing the instructive educational program

In the wake of directing pre-tests for the article bunch, the article did the accompanying:

- Complete units (12) instructive units.
- Number of units (two instructive units) each week.
- The length of the instructive unit was (an hour and a half).
- The length of the fundamental segment was (an hour).
- The time for the applied section was (43) minutes and the educational section was (17) minutes.
- The seven-stage learning cycle strategy included seven stages that were divided and used in the volleyball lesson as follows:
 1. Stimulate the students by displaying the accuracy of defensive performance in the form of pictures or videos in which the technical steps for each skill are explained and who allows the students to discuss each skill. The time for this stage is in the educational unit (5 minutes) in the educational section.
 2. Discovery: The subject teacher encourages the students to perform while holding discussions between the students about each skill during this stage in the educational unit (6D) in the educational section.
 3. Interpretation: The teacher explained how to perform the skill to be learned, focusing on its accuracy, opening questions or inquiries, and focusing on the accuracy of correct performance and handling errors during this stage in the educational unit (6d) in the educational section.
 4. Expansion: Focusing on the students' practical performance of the skill while giving feedback to each student. The time for this stage is in the educational unit (32 minutes) in the applied section
 5. Extension: Asking questions to the students with the process of linking the accuracy of the defensive performance at the time of this stage in the educational unit (4D) and it was done in the applied section.
 6. Exchange: Exchanging information between students to replace incorrect information with correct information. The duration of this stage is in the educational unit (3D) and takes place in the applied section
 7. Evaluation: The students evaluate the performance of the skill individually, and the teacher observes the defensive performance of each student and compares the incorrect performance with the correct performance. The time of this stage is in the educational unit (4D) and it takes place in the applied section.

Post-tests

The tests were conducted on 12/22/2021.

Results and discussions

Table 1. Shows the means, standard deviations, calculated (t) values, and (sig) values in the pre- and post-tests for testing cognitive speed and defensive performance in volleyball

Variables	Units	Pretest		Posttest		(t) calculated	Sig.	Indications
		Mean	STDEV.	Mean	STDEV.			
Cognitive speed	Degree	7.88	0.88	11.92	0.34	19.63	0.000	Sig.
Transmission reception accuracy	Degree	15.44	0.82	27.12	0.36	29.47	0.000	Sig.
Accuracy of the blocking wall	Degree	11.33	0.47	18.69	0.32	21.05	0.000	Sig.

Accuracy of defending the field	Degree	10.95	0.52	19.83	0.29	24.14	0.000	Sig.
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Table (1) shows differences and variances in the values of the means and standard deviations between the pre- and post-tests for testing cognitive speed and defensive performance in volleyball. In order to identify the significance of the differences, the article used the (t. test) for correlated samples, and it was found that the (sig) values calculated for the tests All of them were smaller than the level of significance (0.05), at a degree of freedom (24), which indicates that there are significant differences between the pre- and post-tests and in favor of the post-test.

The article attributes the rise of such contrasts to the students' use and adherence to the educational units according to the seven-year learning cycle strategy in a sequential manner. This strategy included organized exercises and relied on the intellectual aspect and that related to the cognitive aspect.⁶ The use of the seven-cycle learning cycle strategy contributed greatly to developing the student's cognitive speed, because the ability to make decisions in the accuracy of defensive performance helps develop accurate performance, which comes through the student's good vision while applying the seven-cycle learning cycle strategy. When the student practices the performance accurately, this helps. In achieving the skill requirements of the defensive side of volleyball.⁷

The article can credit the justification behind the massive contrasts in because of the technique of the seven-year learning cycle, which contributed and expanded the lucidity of the expected abilities, which was reflected emphatically in the consequences of precision and speed of the abilities, and this is the attributes' and portions of cautious execution's expectation's, and this was not accessible in some volleyball illustrations, and present day learning works. In the methodology of the seven-year learning cycle, it is necessary to form a clear perception of movement because "the modern method of learning has been able to clarify difficult skills, give them clear explanations and visualizations, enrich them with illustrative pictures, and alert the student to errors that may occur in the accuracy of defensive performance",⁸ in addition to implementing these The units relied mainly on the principle of progression in motor learning, which led to enhancing learning and developing all article variables, and this is consistent with what was pointed out that "for the purpose of obtaining learning, there must be attempts to practice exercise, and the most important variable in motor learning is motor practice and the exercise itself."⁹ and that the introduction of modern strategies and their diversity in educational units, which led to a good response by female students, developed their performance in skills, as "female students do not respond to the process of learning any skill in one way and that new and different educational strategies must be used to build and develop their abilities."¹⁰

The article attributes the effectiveness of the seven-year learning cycle strategy, which prompted the student to perform better, as she felt that she belonged to the lesson when she performed the defensive performance, in addition to the encouragement that the teacher gave when performing, so the student was part of a group and the development of skill performance was the result of combined efforts. For members of one group, her desire in one group to achieve this development was a great desire emanating from her, as "the cooperation of the student or learner with the other group, whether she succeeds or not, is working to develop cooperation within the group",¹¹ in addition to the learner performing defensive performance within her group. In front of the teacher and her colleagues after watching the performance of her group members led to the correction of a number of errors that she made when performing, as "feedback is an important and major source of information regarding performance, such as the degree of error, and it works to guide the learner towards achieving a specific goal or standard, as well as It contributes to strengthening the bond between the stimulus and the motor response, and it also works to encourage appropriate motor responses upon repeating the performance, because encouragement clarifies to the learner what is required of her in the correct manner."¹²

Also, this strategy of the seven-year learning cycle strengthened the mutual relationship between the teacher and the student and gave the student an effective role in fulfilling the requirements for skill performance and the lesson and gave her a role in the freedom to discover good performance on her own and apply what she discovered during the lesson through thinking and speed of perception, then visualize the correct performance and this.¹³ It leads to accuracy in performance, as "the teaching process is a situation characterized by interaction between the teacher and the learner, and each of them has a role to play in order to achieve the basic objectives of the lesson. Therefore, the teaching process has become educational experiences that the teacher plans and implements in order to help the learners achieve goals that they had previously planned."¹⁴

Conclusions

1. The seven-course learning strategy has a positive effect on the cognitive speed and accuracy of defensive performance in volleyball for female students.
2. Strategy the seven-year learning and teaching cycle plays a major role in encouraging female students to participate in the learning process by asking questions and inquiries about skills.
3. The learning cycle strategy plays a role in working in groups, which encourages reaching solutions to correct errors and making correct attempts.

4. The learning cycle strategy contributed to creating a spirit of fun, suspense and excitement among the students through working in groups, which helped in this better performance of skills.
5. The strategy of the seven-year learning cycle had an impact on the cognitive speed and accuracy of defensive performance in volleyball for female students through freedom in presenting ideas.

Recommendations

1. Adopting the seven-cycle learning strategy in developing cognitive speed and accuracy of defensive performance in volleyball.
2. Conduct other studies on offensive skills in volleyball, as well as on a sample of students and other games.
3. Adopting the seven-stage learning role strategy in educational units for all stages, due to the increase it has achieved in developing the correct performance of skills and increasing excitement and suspense among students.

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