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Contribution Ratio of Cognitive Learning Outcome in the Performance of the Two Skills of Mastering by Parallel Spherical Standing and Equilibrium on the Balance Beam

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Abstract

The purpose of this paper is to identify the statistical indicators of the searched variables and identify the relationship between the cognitive learning outcome and the performance of the two mastering skills by parallel spherical standing and equilibrium on the balance beam. And the identification of the percentage of the cognitive learning outcome contribution to the performance of the two mastering skills by parallel spherical standing and the equilibrium on the balance beam. The two researchers used the descriptive approach in the survey method and the correlational relations, being the most appropriate to the nature of the research problem. The research community for the second stage students in the College of Physical Education and Sports Sciences for Woman for the academic year (2020-2021) was determined, and their number was (104) students. The exploratory and main research sample was chosen randomly, as the exploratory sample reached (10) students and the main sample reached (40) students with a rate of (38,461%). The conclusions came that the cognitive learning outcome has a positive role in the performance of the two mastery skills by parallel spherical standing and the equilibrium on the balance beam, as well as the cognitive learning outcome contributed well in managing the two mastery skills by parallel spherical standing and the equilibrium on the balance beam. The two researchers recommend it is necessary for female teachers to pay attention to the subject of artistic gymnastics with the outcome of cognitive learning during the educational units because it has an effective and influential role in mastering the performance of the two mastery skills by parallel spherical standing and the equilibrium on the balance beam, and the cognitive learning outcome must be evaluated continuously after completion of Educational units, and testing of motor learning strategies and their methods by the teachers that enable the learner through the acquisition of the intended learning outcomes.

Key word: Cognitive learning outcome.

Introduction:

The educational process has witnessed great progress in recent times and included various fields of methods and strategies that ensure the use of modern scientific methods in the educational process. This progress was reflected at the student's physical, skill, and cognitive level and in various individual and group games, up to skill mastery. The artistic gymnastics game is one of the individual games that are taught in Physical education and sport sciences,

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which include a set of skills, including the two skills of mastering by parallel spherical standing and the equilibrium on the balance beam, and these two skills require the student to have a set of cognitive, physical and skill requirements to enable the student to achieve optimal skill performance in this game. From their performance, and this performance is directly affected by the cognitive learning outcome, which represents all the knowledge, behaviors and cognitive experiences related to the performance of the two skills and learns them more neatly and here lies the importance of research in diagnosing and determining the importance of the cognitive learning outcome in the performance of the two mastering skills by parallel spherical standing and the equilibrium on the balance beam, importance in a scientific and objective manner for specialists and teachers on this important aspect, to be included in the educational units and continuously evaluated and improved, which makes their positive impact on the learning process and optimal performance.

Research problem:

Through the two researchers following up on the technical aesthetics lesson and conducting interviews with the material teachers, I found a lack of interest in the outcome of cognitive learning and did not give enough time in the lectures. Here the problem was embodied in the answer to the question .Is there a correlation relationship between the outcome of cognitive learning and the performance of the two masters' skills with parallel spherical standing and the equilibrium on the balance beam and what is the contribution of the learning outcome to the performance of the two skills.

Research objective:

- Identify the statistical indicators of the searched variables.
- Identify the relationship between the cognitive learning outcome and the performance of the two mastering by parallel spherical standing and the equilibrium on the balance beam.
- Identify the percentage of the cognitive learning outcome contribution to the performance of the two mastering skills by parallel spherical standing and the equilibrium on the balance beam.

Research hypotheses:

- There is a statistically significant relationship between the cognitive learning outcome and the performance of the two mastering skills with the parallel spherical standing and the balance on the balance beam.

Research fields:

- Human field: Female students of the second stage in the College of Physical Education and Sports Sciences for Woman for the academic year (2020-2021)
- Time field: From (9/3/2021) to (28/3/2021)
- Spatial domain: Gymnastics Hall in the College of Physical Education and Sports Sciences for Woman

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Research methodology and field procedures:

Research Methodology:

The two researchers used the descriptive approach with the survey method and the correlational relations, being the most appropriate to the nature of the research problem.

Community and sample research:

The research community is determined by the female students of the second stage in the College of Physical Education and Sports Sciences for Woman for the academic year (2020-2021) and their number is (104) students. The exploratory and main research sample was chosen randomly as following:

- **The main sample:** The main sample (40) players were selected with a rate of (38,461%).

- **The exploratory sample:** The exploratory research sample was (10) players

Means, devices and tools used by the researcher:

- References
- Interview
- Test and measurement
- The Questionnaire
- Computer
- Balance beam device

Variables of research:

- **Cognitive Learning Outcome Scale**: For the purpose of measuring the outcome of cognitive learning, the two researchers approved the scale (Hayam Tariq Ahmed) for the academic year (2015). , As the scale consists of (60) items for the skills of perception by standing parallel and the scale on the balance beam and the correction key (0-1).
- **Evaluate the skill performance:** The two researchers used the results of three arbitrators to evaluate the performance of the two master's skills by parallel spherical standing and the equilibrium on the balance beam. The arithmetic mean of the arbitrators' results was calculated as a final score for performance evaluation.

Exploratory experience

"The exploratory experience is a practical training for the researcher in order to identify the negatives and positives that the researcher may encounter when taking tests to avoid them in the future" [(1)], and in order to find out the negatives and obstacles and the validity of devices and tools and the efficiency of the assisting work team and verify the scientific basis for the scale of

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the outcome of cognitive learning, The two researchers conducted an exploratory experiment on 10/3/2021 on a sample of (10) students. The results of this experiment resulted in a clear picture of how to implement and find the scientific foundations for the scale.

Scientific foundations:

- **Truth factor:**Truthfulness means "that the test measures the characteristic that it was set to measure and does not measure anything else in place of it or in addition to it" [(2)]. The experts agreed, with a percentage of 90%, on the validity of the scale for the individuals of the research sample.
- **Stability factor:**Stability is one of the important characteristics that characterize the test, and consistency refers to the consistency of the scores that the individuals themselves obtain at the different times of the procedure [(3)]. It indicates the stability of half of the scale and extracting the stability factor of the scale completely, then extracting the value of the Spearman-Brown coefficient of (0.927). This value indicates that the scale has a high degree of stability.

The main experience

The two researchers conducted the main experiment on 14-15 / 3/2021 for two days. On the first day, the measure of cognitive output and the skill of by parallel spherical standing was applied, and on the second day, the skill of equilibrium was applied to the sample of the main experiment of (40) students. Auxiliary work and before applying the skills, a warm-up was given to the students, and after collecting the data, they were classified for statistical treatment.

Statistical means:

Researchers used the statistical the Statistical Package for the Social Sciences (SPSS).

Presentation, analysis and discussion of results:
Presentation and analysis of statistical parameters of the searched variables:

Table (1) shows that the results of the investigated variables achieved a normal distribution, and this is what was indicated by Skew ness, as the values of the Skew nesswere acceptable when all tests were limited to (± 1), and this indicates the good distribution of the sample members.

Table (1) shows the arithmetic mean, standard deviations and Skew ness of the searched variables.

Variables	Arithmetic mean	Median	standard deviation	Skew ness
Cognitive learning outcome	42,38	41	7,519	0,550

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skill of by parallel spherical standing	5,73	6	1,984	-0,408
skill of equilibrium	6,49	6	1,757	0,836

Presenting, analyzing and discussing the results of correlation coefficients and contribution ratios between the searched variables:

Table (2) shows the correlations between the cognitive learning outcome and the performance of my mastering skills by parallel spherical standing and the equilibrium on the balance beam, as the results showed that all the values of the correlation coefficient have a significant significance and this is confirmed by the sig values, which came less than (0.05), and through The results show that the values of the correlation coefficients were direct between the cognitive learning outcome and the performance of the two mastery skills by parallel spherical standing and the equilibrium on the balance beam, meaning that the greater the degree of the student's cognitive learning outcome, the higher the degree of her interview with the performance of the two skills. The knowledge and information on the performance of the skill and what follows have been acquired from the learning process and therefore the more this information and cognitive experience about the skill, this is reflected positively on the performance of the skill and the improvement in performance, as the cognitive output enhances the student's awareness of everything that is going on around her. From the excessive movements and thus the apparent response appears, which is the stage that means increasing the ability of the body parts to respond to the physical performance I see and this is what (Salem Ahmad)[4] referred to, "that the cognitive learning product has levels represented in perception, preparation for performance, directed response, performance mechanism and apparent response" [5].

Table (2) shows the correlation coefficient between the cognitive learning outcome and the performance of the two mastering skills by parallel spherical standing and the equilibrium on the balance beam

Variables	R value	Sig level	Sig type
skill of by parallel spherical standing	0,664	0,000	sig
skill of equilibrium	0,589	0,001	sig

Table (3) shows the percentage of the cognitive learning outcome's contribution to the performance of the two skills perception by parallel spherical standing and the equilibrium on the balance beam, which amounted to (48.10%), which is a good percentage that confirms the clear effect of the cognitive learning outcome on the performance of the two perception skills by standing parallel and balance. The cognitive learning outcome is the student's knowledge and understanding of the skills and how to perform, and it is the cognitive information that is

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acquired in the educational unit about the skill and this result is acquired by the student at the end of the educational unit and thus will have an important and positive role that is directly reflected on the student's performance of the skill, the more this knowledge, experience and information are acquired. Available during the educational units whenever the student performs more accurately and proficiently for these two skills, as the cognitive learning product is concerned with the forms of intellectual activity of the individual, especially the mental processes of (memorizing, understanding and analyzing) that work on walking the mental processes. It takes the form of various skills and dimensions depending on thinking in order to record the student's information, retrieves and process it [(6)].

Through the educational units and the implementation of the curriculum, the student will acquire knowledge and learning outcomes and focus on the important priorities in line with the performance of skills. The student performs skills based on the knowledge and information preserved for her, and this helps the ability to act [(3)].

A student of science and knowledge of the pre-planned curriculum, as she will be able to perform all academic tasks at the end of the year "[(7)].

Table (3)shows the values of the regression coefficients for the cognitive learning outcome in the performance of the ascension and balance skills on the balance beam.

Variables	Reliability coefficient		Correlation coefficient	F value	Sig	Contribution
	A Constant	0,142	0,694	7,581	0,000	0,481
skill of by parallel spherical standing	B1	0,263				
skill of equilibrium	B2					

Conclusions and Recommendations:

Conclusions:

- The cognitive learning outcome has a positive role in the performance of the two mastering skills by parallel spherical standing and the equilibrium on the balance beam.
- The cognitive learning outcome contributed well to managing the two skills of rising by parallel spherical standing and the equilibrium on the balance beam.

Recommendations:

- It is necessary for the female teachers to pay attention to the subject of artistic gymnastics with the outcome of cognitive learning during the educational units

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because of its effective and influential role in mastering the performance of the two skills of mastering by parallel spherical standing and the equilibrium on the balance beam.

- The cognitive learning outcome should be evaluated continuously after the completion of the educational units.
- Testing of the motor learning strategies and their methods by the teachers that enable the learner through the acquisition of the intended learning outcomes.

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