

Effect of Brainstorming Method According to the Mental Biorhythm Cycle in Learning Dribbling and Scoring in Football for Students Aged (12 -13) Years in Iraq

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Abstract

Most of the learning methods in teaching educational units in the school depend on the style of the order and the student's discretion and not to give him the freedom to rely on his own abilities to solve some educational situations. Furthermore, the problem that needs to be addressed is that most teachers organize their educational units evenly throughout daily and weekly exercise times at one rate. While there are natural influences of mental variables that affect the internal environment of the individual and the external influences of the student's surroundings. These effects are more effective during the positive stages of the biorhythm, so the researchers tried to take advantage of those positive mental abilities in the application of brainstorming method and learn about the effect of brainstorming method according to the mental rhythm cycle Learn to ball play and scoring skills for students aged (12-13) years. The researchers used the experimental curriculum on a sample of (40) students divided into two groups (disciplined and experimental) involving (20) students in each group. The researchers have found the dynamic rhythm of the mental cycle of the members of the experimental group, which acquired the skills of ball running and scoring football according to the brainstorming style so that iterations of performance are minimized according to the positive and negative state of the mental cycle The application of the method has lasted for 10 educational units and the disciplined group has learned according to the method followed by the teacher of the material and without taking into consideration the dynamic rhythm, and the most important research findings indicate that there is a positive effect of the brainstorming method according to the role of mental rhythm in learning soccer and scoring football skills. The most important recommendations are the need to use brainstorming method to learn the skills of soccer and scoring football and the need to minimize repetitions according to the positive and the negative situation of the mental rhythm cycle by increasing it in the positive situation and reducing it in the negative situation.

Keywords: brainstorming; dynamic rhythm; dynamic rhythm cycle; ball running; scoring.

Introduction

It was necessary for the educational operators to use effective methods to benefit from the information revolution in this field which has focused on the student as the focus of this process and move away from the lengthy explanation when learning the skills and help the student to invest his energies and to strengthen his right decisions and modify the wrong ones.

Brainstorming is a method that stimulates and generates creative ideas among learners through special sessions designed to employ the power of thought to solve a problem in a particular educational situation and to reach ideas that the learner cannot reach alone. Osborne(Osborn 2001) defines it as an innovative conference that aims to produce a list of ideas that can lead to the crystallization of the problem and eventually lead to the solution of that problem. This method is one of the methods that help the student in developing his mental abilities because he uses the mind to solve a problem or obstacle he encounters,

which requires him to analyze those problems and find appropriate solutions to make the right decision. Abo-Alam(Abo-Alam 1989) thinks that the style of brainstorming is "a technique which is used by a group of individuals to find solutions for a specific problem by showing or producing self-evident ideas altogether through a group."

Because the learner is living in a changing environment that affect each other, so many natural changes (genetic and acquired) that affect him during the period of his age and some of these variables appear on a regular daily, weekly, monthly, and yearly basis. The vital rhythm is one of the most important of these uncommon variants of our teachers, which have been defined by Ali & Sabry (Ali and Sabry 1994) As a "regular, short-and long-term dynamic changes that increase or decrease physical, mental and emotional activity in humans. These changes are undoubtedly linked to both the internal (genetic) environment as well as the external surrounding". Kacy (Kacy 1997) said "As the repeated dynamic reaction to the emotional, physical, mental and intuitive cycles of the organism as a result of the environmental influences surrounding him and taking a continuous form" The dynamic rhythm did not take the space it deserved in teaching and learning, which can be used to organize their teaching methods and invest the effort and time in obtaining advanced results by organizing the scheduling of the required performance iterations and increasing or decreasing their intensity based on the positive and negative stages and neutrality (zero) for the mental rhythm cycle.

The process of making the most of some important teaching methods sometimes needs to look for details that make this method highly effective and gives the desired benefit of natural variables and physical and physiological benefit in the development of skills, which requires educators to invest the duration of the positive stage for the mental cycle of the dynamic rhythm which is characterized by activity and vitality for the purpose of developing skills performance and organizing the process of education and distributing the duplicates in a manner which is consistent with the mentality of the rhythm of the dynamic.

It is known that the game of football is one of the games that consists of a large number of basic skills, including the ball play and scoring, which requires the teacher to teach and communicate to the learner and develop it well in order to raise the performance of his skills. This is achieved through the use of the appropriate method. It is appropriate and consistent with the nature and inclinations of learners and their desires and brings them to a level of ability and high degree of efficiency and effectiveness to reach the goals to be achieved.

The researchers noted that the majority of teaching methods in the education of educational units in the school depend on the style of the order, the restriction of the student and the lack of freedom to rely on his abilities to solve some educational situations. Furthermore, there is a problem that needs to be addressed, namely that most teachers organize their educational units evenly throughout the daily and weekly exercise at a one rhythm, while there are natural influences of mental variables that affect the internal environment of the individual and the exterior of the environment. These effects become more effective during the positive stages of the biorhythm, so the researchers tried to take advantage of those positive mental abilities in the application of brainstorming method in different sizes to repeat the exercise in order to control the process of learning the skills of the ball play and scoring. It is based on the mental indicators of the positive and negative phase of each student by controlling the volume of repetitions and increasing them while passing the positive phase of the activity, vitality, desire and demand for learning. And attempt to codify the volume of duplicates during the process of passing to the negative stage as the opposite of the positive stage in a scientifically achievable way to obtain outstanding results in learning the performance of the skills of running and scoring ball for students aged (12 – 13) years.

The purpose of the research

To identify the influence to the brainstorming style according to the mental cycle of the dynamic rhythm to learn the two skills of running with the football and scoring with it for the student how have age (12 - 13) year .

The hypothesis: There is a positive effect of brainstorming method according to the mental rhythm cycle in learning the skills of football and scoring for students aged (12-13) years.

Previous studies

- 1- Study of Reilly & Brooks(Reilly and Brooks 1990)aims at examining the timing of the dynamic rhythm in relation to the pulse rate, temperature, the operations of the Metulol feet (metabolism) during the rest and before and after the training. The researchers used the experimental method and a sample of 15 players
1. The most important results were: there is a fundamental change in the daily dynamic rhythm of rest time for pulse rate, body temperature, metabolism, maximum oxygen consumption VO2 max, pulmonary ventilation.
- 2- A study by Mona(Mona 2002) aimed to identify some of the variables associated with the dynamic rhythm of the physical and mental cycles of athletic achievement and through the analysis of the hormone gland thyroid and thyroid catalyst. The researcher used the descriptive curriculum and the sample size involved 10 players. The most important results were: there is a difference in the secretion of the thyroid gland between the top and bottom of the physical and mental cycle of each player, and the athletic achievement is affected by the physical and mental cycle, whenever the physical or mental cycle is at the top the higher the achievement.
- 3- The research of Mounir(Mounir 2004) aimed at developing a training curriculum for the development of the distinctive force quickly to identify the impact of the dynamic rhythm in the physical cycle of football players. The researcher used the experimental curriculum and the size of the sample was 20 players. The most important results were: the training curriculum and the exercises used have a positive effect in the development of the rapid strength of football players according to the dynamic rhythm of their physical cycle.

Material & methods

Research sample

The research was conducted at the Al-Mufid Middle School for boys in Dhiqar province in Iraq during the period between 2016 and 2019 on the first graders average age (12-13) years and continued research for six months from October 2018 to May 2019 to check the hypothesis of the research.

The researchers selected their research sample from 40 of the first grade students (12– 13) years old. They were divided randomly into two groups with 20 students for each.

Procedures

The dynamic rhythm of each student was calculated prior to the application of the pre-test and placed in a calendar before the teacher, and the experimental group was divided into four sub-groups depending on the periods of the mental rhythm cycle, it may appear that there is a compatibility in the rhythms of students in terms of the convergence or match of their vitals in the positive and negative phases, the first group involved (5 students) and second group (5 students) and third group (6 students) and fourth group (4 students). Each group of these individual groups performs the same number of iterations of performance during the stage The same number of repetitions during the negative phase, with a focus on giving these subgroups (two-thirds) of the volume of the total skill repetitions during the positive phase of each student, giving (one third) the total amount of skill repetitions during the negative phase of each student, and the number of units (10) educational units; (2) units per week, unit time (45 minutes). The practical involve teaching football running and scoring skills in the brainstorming style are as follows:

- 1- Preparatory section: A time of 8 minutes includes a general and special warm-up.
- 2- Main section: It is divided into two parts, an educational part and a duration of (15) minutes involving several stages of brainstorming:

First: The teacher will discuss the students in a simplified manner about the skills of the ball running and scoring and clarify the technical performance of the skill

Second: Reformulate the problem (dimensions of the problem) by asking some skill-related questions, for example, "(what is the appropriate distance between the ball and its striking foot) (how the arms and eyes will be during the performance of the skill) and then asking new questions with each educational unit

Third: Several alternatives were proposed for learners as a means of helping the student to innovate and think. The researchers prepared them in the school playground in the form of a poster (colored flex).

Fourth: Setting up brainstorming session.

- ✓ Dividing students into four groups (5 students) and selecting a leader for each group.
- ✓ The ideas presented are recorded so that they are clear to all.
- ✓ The ideas presented are arranged, organized and scheduled before the end of the session.
- ✓ The leader of the group is asked to direct his colleagues by identifying the closest solutions and alternatives that are scarce and cannot be applied.
- ✓ Choosing the most suitable solutions and alternatives offered by students

Applied part (18 minutes) and then the application of solutions and alternatives in a practical way is done.

3- Concluding segment, with a duration of (4) minutes and a reverse reference and orientation game.

Performance testing

1- Tests of the ball between (5) flags:

Test objective: Measure the ability to run with the ball by changing direction

- Tools: Legal football, measuring tape, five flags or suitable seats height.

- Performance Description: Placing the first flag at a distance of 2.70m from the starting line, the student stands with the ball behind the starting line and when the start signal is given, the student will run the ball between the flags back and forth, and give each testee two attempts and the time counts 1/10 of the second as shown in Fig 1.

- Registration: The degree of the testee is the average total time the player takes in performing the two attempts.

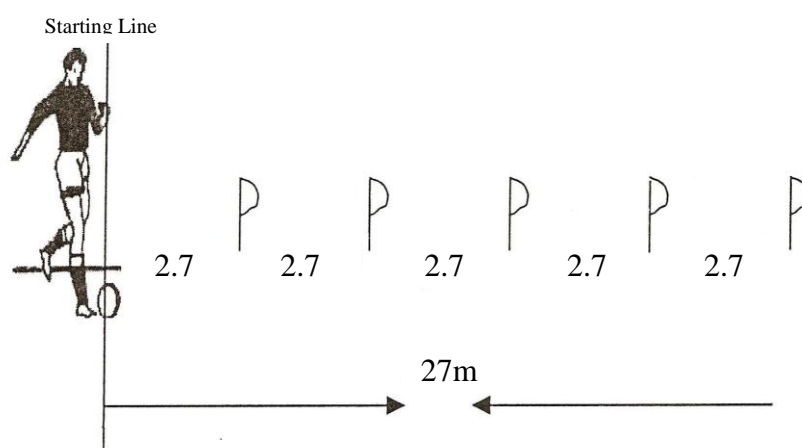


Figure 1. Zigzag ball running testing between 5 flags

2- Scoring accuracy test:

- Purpose of the test: measuring the accuracy of the scoring.

-Tools: Bar to select the shooting area of the test, and (5) balls in specific place of the box.

- Performance description: The students stand behind the ball number (1) and when the starting signal is

given, the ball is pointed to the goal, then repeats the aim of the ball number (2) and so until the end of the shoot of the ball number (5) to take the student time and appropriate to carry out the shoot as illustrated in Figure 2.

- Registration: The score is calculated by the total grades that the student obtains from the kick of the five balls so that you get the shoot degree specified in each area that the ball goes on to calculate the dividing lines within the highest grade area and take into account that the shooting outside the goal limit is (zero) degree noting that the highest degree of testing is (25) degree.

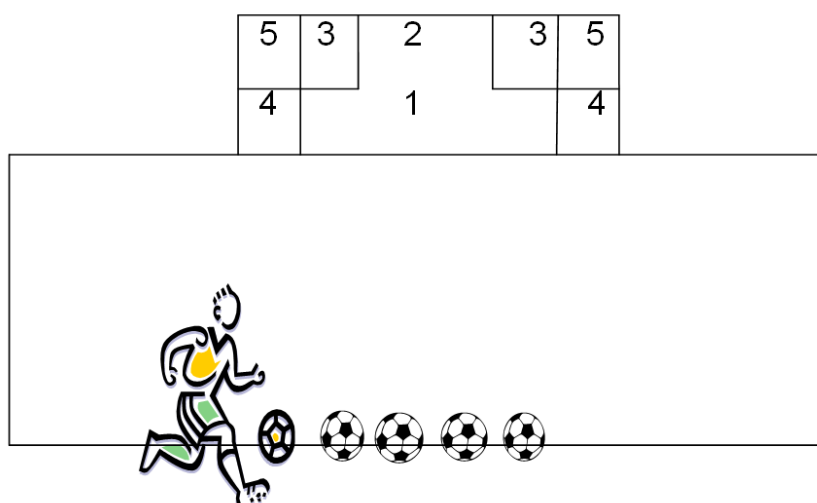


Figure 2. Scoring accuracy test

Results

Table 1. The significance of the differences and the groups tests of the disciplined and experimental in the tests of the skills of the ball running and scoring football

Statistics Variables		Experimental group		Control group		Calculated (t) value	Significance level*	Statistical significance reference
		Mean	Std. Dev.	Mean	Std. Dev.			
Football running	Second	16.51	1.92	14.83	2.13	2.58	0.001	Incorporeal
Scoring	Degree	15.47	2.03	18.89	2.61	3.873	0.0014	Incorporeal

* Incorporeal at significance level equal or bellow (0.05) and freedom level at (38)

The results shown in Table 1 showed that the value of the calculated significance in the test and scoring of the ball was less than the value of the significance level (0.05), which indicates the existence of statistically significant differences between the groups to the experimental group.

Discussion

The researchers attributed the reason for the superiority of the experimental group, which used the brainstorming method according to the cycle of mental bio-rhythms to the effectiveness of the brainstorming method in raising awareness and consciousness of the skill performance by the students because this method provided a broad base of information about the skills which helped the students to understand the problems they are facing during practice and to develop the cognitive power of learners, thus increasing the energy, diversity and authenticity of their ideas which confirmed by Musfer(Musfer 2003) who said that "the method of brainstorming provides an opportunity for the learner to generate the largest number of ideas to address any subject within a period of time in a climate dominated by freedom and safety in putting ideas away from sources and evaluation".

The researchers also think that there are many skills that evolve through continuous exercise and repetition, but this development is exceptional and unique if combined with a scientific curriculum codified according to the dynamic rhythm of the mental cycle, which is indicated by Yarrab(Yarrab 2002) that "The mental cycle has an impact on the memory, alertness, speed of learning, thinking ability and accuracy in calculating things and have a great relevance with mental processes in the positive phase Where you have the ability to understand things, make the right decision and react quickly, on the other hand, in the negative phase, it is difficult to understand new ideas and concepts and lack of decision-making, but the critical point of this session is weakness or delay in mental processes.

The development in the control group is less than the experimental group. The researchers attributed this development to the continuous repetition of the performance of the skills of the ball running and scoring during the educational unit and in the style of the teacher. Learning and performance is more effective when education is a part of the learner Performance, repetition and practice this is what Schmidt & Lee(Schmidt and Lee 2005) pointed out that "for the purpose of acquiring learning there must be repetitions of exercise and that the most important variable in kinetic learning is the kinetic exercise and the exercise itself.

Conclusions

1. There is a positive effect of the brainstorming method according to the mental rhythm cycle and the method used to learn the skills of the ball running and scoring it for students aged 12 - 13 years.
2. The superiority of experimental group that used the method of brainstorming according to the mental rhythm cycle of the original group in the tests of the ball running and scoring for students 12 - 13 years old.

Recommendations

1. The need to emphasize the use of brainstorming method as an effective teaching method in learning the skills of football running and scoring for students aged 12 -13 years.
2. The need to codify repetitions according to the positive and negative state of the mental rhythm cycle by increasing it in the positive situation and reducing it in the negative situation.
3. The need for conducting similar studies taking other mental rhythm cycles or other sport activates to consider.

Conflicts of interest

The Author declares that there is no conflict of interest.

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