

THE EFFECT OF AN EDUCATIONAL CURRICULUM USING THE BARNES MODEL ON DEVELOPING CREATIVE THINKING AND LEARNING SOME OFFENSIVE HANDBALL SKILLS FOR SECOND-STAGE STUDENTS AT THE UNIVERSITY OF THI-QAR

Majid Mohammed Msaed

University of Misan , College of Physical Education and Sports Sciences, Misan, Iraq
majidalkaapi@uomisan.edu.iq

Farazdaq A. Hmddan

University of Misan, College of Physical Education and Sports Sciences, Misan, Iraq
farazdaq@uomisan.edu.iq

Abrar Jabbar Ammar Al-Jaberi

University of Misan, College of Physical Education and Sports Sciences, Misan, Iraq
aljabriabrar007@gmail.com

ABSTRACT

The study sought to determine the impact of Barnes' paradigm on enhancing creative thinking in the acquisition of offensive skills. Hence, the significance of research is demonstrated through the application of the Barnes educational model and its influence on fostering creative thinking and acquiring fundamental handball skills. This model facilitates the assessment of student learning in a precise scientific manner, highlighting the inadequacy of contemporary strategies and models in skill acquisition. Consequently, researchers have recognized the value of implementing the Barnes educational model to enhance creative thinking among students. Therefore, one of the research objectives is to determine the influence of the Barnes model on the enhancement of creative thinking skills, specifically in relation to learning handball. The researchers employed an experimental approach, utilizing a pre-and post-test design with both experimental and control groups. The study was conducted within the student population of the second stage in the College of Physical Education and Sports Sciences at the University of Thi-Qar during the academic year (2022/2022), with a total of 152 participants. The researchers concluded that incorporating the Barnes method in educational units enhances learners' skill performance in offensive skills. Additionally, this method boosts students' motivation and enthusiasm while directing their attention toward improving motor performance. The primary suggestions were to implement the utilization of educational modules developed by researchers, following the Barnes method, after their efficacy was demonstrated on second-stage students at the Faculty of Physical Education and Sports Sciences - University of Thi-Qar. The focus was on applying this educational approach to acquire offensive skills in different games, due to its beneficial influence on enhancing the learning process.

Keywords: Educational Curriculum, Barnes Model, Creative Thinking, Offensive, Handball.

INTRODUCTION

Learning and motor learning have emerged as significant subjects of interest for physical education teachers, sports coaches, learners, and researchers in the realm of sports (Schmidt & Wrisberg, 2008). Understanding the scientific principles underlying movement, including its development, origins, and the factors that influence it, as well as knowledge of how learning takes place and methods to enhance and assess it, is crucial for sports educators in all domains (Feu et al., 2019). This knowledge enables them to effectively guide learners in acquiring new skills and knowledge. These aspects of knowledge serve as fundamental building blocks for researchers in the broader field of sports and specifically in motor the process of motor learning involves mental processes, making it essential to examine various mental processes and models, their significance, and practical applications. This examination aims to enhance our understanding of motor learning as the process of information processing, starting from the moment the stimulus is received and continuing through the response stage while considering the internal mental processes occurring within the brain (Doyle, 2023). The Barnes model utilizes various technical approaches primarily based on the recommendations of Osborne researchers, which involve employing brain stimulation to enhance creativity. This model emphasizes collective thinking that promotes the generation of a wide range of ideas (Vaughan et al., 2019). The method relies on brainstorming, where diverse ideas are generated and subsequently filtered and evaluated to arrive at effective solutions. The motor programs are capable of responding to several stimuli. For teachers and coaches, the objective is to replicate real game scenarios to enhance the performance of their players (Siedentop et al., 2019). To achieve this, the learning process must consider the creation of various kinetic programs that simulate different situations and forms of play (Mitchell, Oslin & Griffin, 2020). The utilization of contemporary teaching methods and models is aimed at fostering the development of fundamental skills for learners both in and outside the classroom. This shift in approach helps transform the student's role from a negative one to a positive one overall (Istance & Paniagua, 2019). Consequently, learning methods and models are now integral to the implementation of many educational and instructional programs and curricula, as they effectively facilitate the delivery of knowledge to learners with minimal effort and time, unless the subject matter is theoretical or practical (Valério, Farias & Mesquita, 2021). Given the significant increase in knowledge and the widespread technological advancements that have impacted various aspects of modern life, the primary objective of education should be to adapt to these changes (Brem, Viardot & Nylund, 2021). To effectively motivate students, teachers must employ diverse and varied instructional approaches. They must possess a deep understanding of the mechanisms of learning, as well as the impact of teaching techniques and resources on the pace of reaching learning objectives and the overall success of the educational process. (Mitchell, Oslin & Griffin, 2020). The role of thinking is crucial in motor learning and the development of learning abilities. It enables learners to find effective solutions and reach the desired level of proficiency (Schmidt & Lee, 2019). Creative thinking encompasses various fundamental processes, including acquiring and retaining knowledge, observing, comparing, classifying, and engaging in sensory and practical thinking. It also involves cognitive levels of thinking (Chen, 2021). Hence, the significance of research is demonstrated through the use of Barnes' educational paradigm and its influence on innovative cognition. Engaging in creative

activities allows students to acquire fundamental handball skills, so enhancing their learning and enabling accurate scientific evaluation.

Search Problem

Several educators have embraced the utilization of teaching methodologies and specialized learning approaches. While these methods have achieved some objectives and fostered learning skills, there is still a need for their enhancement in accordance with contemporary techniques, strategies, and learning models. These advancements not only facilitate time and effort conservation but also align with the latest research findings (Burhaein et al., 2021; Renshaw & Chow, 2019; Siedentop, Hastie & Van der Mars, 2019). The researchers, who are professors at Iraqi universities, have identified a problem in their research. They found that the sample members have a weakness in performing certain fundamental handball skills, indicating difficulty in learning these skills (Hussein & Kasim, 2022; Kadhlm & Kareem, 2023; Salih, Hashim & Kasim, 2021). Hence, the researchers addressed the issue of the limited utilization of contemporary strategies and models in skill acquisition, specifically in terms of cognitive processes involved in skill execution. Consequently, the researchers explored the potential of implementing the Barnes educational model to foster creative thinking among students, thereby facilitating the acquisition of fundamental handball skills.

Objectives of The Study

1. Identify the effect of the Barnes model in developing creative thinking among the research sample .
2. Identify the impact of the Barnes model and its impact on the development of creative thinking and learn some basic skills of handball among the research sample.

Hypothesis of the Study

1. There are statistically significant differences between the pre-and post-tests of the experimental group in creative thinking and some basic skills in handball and favour of the post-test.
2. There are statistically significant differences in the post-test between the experimental and control groups in creative thinking and learning some basic skills in handball for the benefit of the experimental group.

Areas of Study

Human Area: Second-stage students in the Faculty of Physical Education and Sports Sciences - University of Thi-Qar.

Time Area: From 23\10\2022 To 18\1\2023

Spatial Area: Indoor sports hall at the Faculty of Physical Education and Sports Sciences – University of Thi-Qar.

METHODOLOGY

Field Research Procedures

The selection of research method by researchers is contingent upon the inherent characteristics of the topic at hand since it serves as the pathway towards uncovering scientific truths by adhering to a prescribed set of fundamental principles to arrive at a definitive conclusion (Chilisa, 2019). The researchers employed an experimental methodology, utilizing a design that incorporated pre-and post-tests, as well as experimental and control groups.

Community And Sample of The Study

The objectives and procedures of the research play a crucial role in determining the sample selection. Researchers need to consider the research suitability of the sample, including its kind and size, to gather the necessary information to fulfil the research purpose. The research community consists of second-stage students in the Faculty of Physical Education and Sports Sciences at the University of Thi-Qar for the academic year (2022/2022). There are a total of 152 students divided into four divisions, as shown in Table (1). The sample for the study was selected from the original community and will be further divided to meet the study's requirements.

First: The study sample for statistical analysis consisted of 74 students from division A-B, representing 47% of the research community.

Secondly, the exploratory experiment included a sample of 27 students who were randomly selected using a lottery approach from division C-D of a student body, representing 20% of the research community.

Thirdly, after removing the students who failed or were missing, the percentage of the research community that remained was 9%. These individuals were divided into two study groups based on the determinants of the experimental design. Each group was randomly assigned as either a control group or an experimental group .

❖ The control group consisted of 18 students from Division (C) who were taught handball skills based on the curriculum followed by the College.

❖ The experimental group consisted of 18 students from Division (D) who received instruction in the abilities being investigated, as provided by the researchers.

Means of information gathering, tools, and devices

Means of collecting information

The researcher utilizes Arab and foreign sources, as well as the internet, to gather information. Members of the sample will complete a creative thinking scale form, as well as a registration form for the results of fundamental skills tests. Additionally, personal interviews will be conducted with experts and specialists. The research will also involve testing and measurement, as well as the assistance of a work team. Finally, scientific observation will be employed.

Tools used in research

The researchers used the following tools: legal handball court, legal handballs (16), signs (10), whistle, tape measure, adhesive tape, illustrations, and pens.

Devices used in research

Items include a video camera, DVD player, Acer and HP computers, stopwatch, and medical weighing scale.

Field Research Procedures**Preparation steps for the application of the experiment**

To investigate the impact of an educational curriculum in Barnes style on creative thinking, the researchers implemented the independent variable on the research sample by following these steps :

Setting up the necessary equipment, tools, and materials, identifying the research variables, creating a suitable environment for conducting the experiment, conducting preliminary experiments, administering a pre-test to the sample, implementing the main experiment, conducting a post-test, and creating a form for data collection and analysis.

Identify offensive handball skills

The offensive skills of handball were assessed based on the curriculum established by the Ministry of Higher Education and Scientific Research. The according to the importance of the skills was presented to experts and specialists in handball.

Table 1: Shows the percentage of skill tests according to the expert opinion poll.

Test Name	Unit of measurement	Percentage
Wall Handling and Receipt for (30S)	Number/Frequency	73%
Continuous Dribbling in a zigzag direction for a distance of (15 m)	Second	91%
Shooting from a line (7 m) of stability and the laboratory blindfolded	Degree	82%

Creative Thinking Scale

In 1989, scientist Bernston developed a scale to measure individuals' creative thinking. The scale originally consisted of 74 items, and participants were asked to respond to each item by choosing one of three alternatives: agree, hesitant, or do not agree. The total score on the scale ranges from 74 to 222. The scale forms were distributed to students who were part of the research sample, after obtaining their approval. The completed forms were then collected and students were classified based on their responses to the test paragraphs, which were labelled as A, B, or C according to the test key.

Table 2: Table showing the percentage among the opinions of experts to determine the agreement of experts paragraphs of the scale by (70%).

Number item	Expert opinions		Percentage		Number item	Expert opinions		Percentage	
	Agree	Disagree	Positive	Negative		Agree	Disagree	Positive	Negative
1	14	6	%70	%30	27	14	6	%70	%30
2	20	0	%100	%0	28	20	0	%100	%0
3	16	4	%80	%20	29	15	5	%75	%25
4	18	2	%90	%10	30	18	2	%90	%10
5	4	16	%20	%80	31	17	3	%85	%15
6	20	0	%100	%0	32	20	0	%100	%0
7	16	4	%80	%20	33	18	2	%90	%10
8	18	2	%90	%10	34	14	6	%70	%30
9	14	6	%70	%30	35	14	6	%70	%30
10	20	0	%100	%0	36	20	0	%100	%0
11	14	6	%70	%30	37	16	4	%80	%20
12	20	0	%100	%0	38	18	2	%90	%10
13	16	4	%80	%20	39	18	2	%90	%10
14	18	2	%90	%10	40	17	3	%85	%15
15	17	3	%85	%15	41	20	0	%100	%0
16	18	2	%90	%10	42	18	2	%90	%10
17	15	5	%75	%25	43	14	6	%70	%30
18	17	3	%85	%15	44	20	0	%100	%0
19	14	6	%70	%30	45	16	4	%80	%20
20	20	0	%100	%0	46	4	16	%20	%80
21	14	6	%70	%30	47	17	3	%85	%15
22	18	2	%90	%10	48	18	2	%90	%10
23	19	1	%95	%5	49	17	3	%85	%15
24	15	5	%75	%25	50	14	6	%70	%30
25	4	16	%20	%80	51	5	15	%25	%75
26	20	0	%100	%0	52	20	0	%100	%0

Handball Offensive Skills Tests

The researchers conducted personal interviews with specialists to assess the validity of the selected fundamental skills tests (Passing and Catching, Dribbling, and Shooting) for the research sample. The tests were chosen based on information obtained from scientific sources. The experts reached a consensus on the reliability of certain tests for assessing the skills being investigated in the sample population. They acknowledged that these tests are standardised and suitable for use in the Iraqi environment.

Specifications of handball offensive skills tests

1. Wall handling and receipt for a distance of (3) meters (Clanton & Dwight, 1996) .
2. Shooting from a line (7 m) from stability and the player blindfolded (Lidor et al., 2005).
3. Continuous Dribbling in a zigzag direction for a distance of (15) m (Visnapuu & Jürimäe, 2009).

Exploratory experiment

The exploratory experiment is a crucial stage in scientific research implementation. It provides researchers with valuable information and observations about their research procedures (Baxter & Jack, 2008). The exploratory experiment is essentially a smaller version of the main experiment. Its purpose is to either uncover scientific facts or test the feasibility of the main experiment. It can also be used to identify obstacles and challenges that may hinder the application of the main experiment. Additionally, exploratory experiments can serve as training opportunities for researchers. In this case, two exploratory experiments were conducted:

First exploratory experiment

The researchers conducted an initial exploratory experiment on Tuesday (25/10/2022) to assess the safety and validity of tests and tools, their appropriateness for the research sample, and any potential obstacles that may arise. The experiment also aimed to determine the duration of the exercises used in the research and assess the ability of the assistant team to perform the tests and understand the methodology, in order to facilitate the implementation of the experiment by the researcher.

Second exploratory experiment

The researchers conducted the second exploratory experiment on Wednesday, October 26, 2022, at 9:00 AM. The experiment involved a sample of 9 students from the research community. The purpose of the experiment was to assess the clarity of the paragraphs in the scale, determine the student's ability to answer them, identify any difficulties encountered, and evaluate the scale's validity. Additionally, the researchers aimed to understand the challenges associated with implementing the creative thinking scale and determine the time required for its administration.

Pre-tests

The pre-tests were administered to the research participants on Thursday, October 27th, 2022. The tests took place at precisely 9:00 AM in the enclosed hall of the College of Physical Education and Sports Sciences at the University of Thi-Qar. The assistant staff were present during the tests, and all necessary conditions were set up. The tests were explained to the participants before their administration, allowing them to understand and attempt them. Sufficient time was given for warm-up exercises, and all test requirements were prepared in advance. The test results were documented in accordance with the specified instructions for each individual test.

Main experience

Following a thorough examination of the outdated vocabulary and teaching methods used in the lectures at the College of Physical Education and Sports Sciences - University of Thi-Qar, the researchers obtained the necessary approvals and proceeded to implement their prepared educational units on Tuesday (1/11/2022) at precisely ten o'clock in the morning. The educational unit was administered to a sample of twelve students two days after conducting

the pre-test, in the hall of the College of Physical Education and Sports Sciences. The programme was implemented from (1\11\2022 to 29\11\2022). The researchers implemented a total of 8 educational units, with each unit lasting 90 minutes. These units were conducted twice a week for a duration of four weeks. The sessions took place in the hall of the College of Physical Education and Sports Sciences, starting at ten o'clock in the morning. Each unit began with a 20-minute warm-up session for the participants, followed by a 60-minute main session where the assistant staff presented exercises selected by the researchers. Each educational unit included five exercises that were repeated multiple times. The control group, on the other hand, continued to learn in the usual manner. At the end of each unit, a specific skill was introduced, and the final part of the session involved 10 minutes of calming and relaxing exercises.

Post-tests

Following the completion of eight educational units over four weeks, the post-test was administered on Wednesday, November 30, 2022, precisely at nine o'clock in the morning. The testing conditions were carefully adjusted in the hall of the College of Physical Education and Sports Sciences to ensure consistency with the pre-tests, including the use of the same staff and thorough preparation in terms of time, location, and materials.

Statistical Methods

The researchers used the Statistical Bag Program (SPSS) version 23.

RESULTS

Presentation, analysis, and discussion of the results of the pre-and post-tests of the experimental and control groups:

Presentation and analysis of the results of the pre-and post-tests of the control group

The findings of the pre-and post-tests for the control group in all study variables, level, drum, and correction from stability, are presented in Table (3) below.

Table 3: Shows the arithmetic media, standard deviations, arithmetic mean difference, standard deviations of the arithmetic mean difference, and the value of (T) to indicate the differences for the control group with pre-and post-test.

Variables	Pre-Test		Post-Test		T	Sig
	M	SD	M	SD		
Passing and Catching	6.27	4.48	7.44	3.43	1.81	0.087
Dribbling	36.72	4.52	34.16	6.47	2.50	0.023
Shooting	10.05	4.09	13.44	5.37	7.90	0.000
Creative thinking	15.11	3.87	19.56	3.43	3.85	0.089

* Significant at a significance level of $0.05 <$ and a degree of freedom of 17.

Based on the information presented in Table (3), it is evident that there are notable disparities between the pre-and post-tests of the experimental group, specifically in the variables of search (Dribbling), stability correction, and creative thinking. The post-tests yielded more favourable results. Researchers attribute this progress to the educational vocabulary that was implemented. Preschool education primarily focuses on the curriculum's vocabulary to

facilitate learning at this time. This approach effectively demonstrates development, as learners adeptly acquire and demonstrate a significant level of control and performance. Furthermore, to persist indefinitely, for this specific assembly, individually. I collected samples from participants in the experimental group. These are seen as inherent occurrences in the process of acquiring knowledge. Therefore, it is necessary. An evolution in learning has been identified by Vveinhardt, Fominiene, and Andriukaitiene in 2019. If the teacher adheres to the fundamental procedures, the process of learning and teaching will involve practising, ensuring accuracy, maintaining concentration, making repeated efforts, and continuously repeating these processes until the performance has solidified. However, it is observed that the control group's sample did not produce any significant results in the test, handling, and receipt. The error ratio of 0.087 exceeds the significance level of 0.05, indicating the lack of statistically significant differences between the pre-and post-tests. The researchers attribute this to the need for additional possibilities in handling and receiving skills, beyond what is covered in the curriculum taught by the subject teacher. They also emphasise the importance of diversifying the exercises used during these units to maintain student motivation and prevent boredom, as noted by Hess (2002). The utilisation of a variety of exercises, techniques, and methodologies in sports instruction is optimal for fostering an environment imbued with enthusiasm, exhilaration, and enjoyment. This approach facilitates effective learning and swift mastery of movements and sporting activities. Therefore, the second half of the initial hypothesis has been accomplished, indicating that there are statistically significant disparities between the pre-and post-tests of both the experimental and control groups in terms of the advancement of creative thinking and offensive handball abilities.

View and analyze the results of the pre-and post-tests of the experimental group.

The results of the pre-and post-tests for the experimental group in several research variables, such as the creative thinking scale, handling skill test, receiving from the head level, and correction from stability, are presented in Table (4) below.

Table 4: Shows the arithmetic media, standard deviations, arithmetic mean difference, standard deviations of the arithmetic mean difference, and the value of (T) to indicate the differences for the experimental group with pre-and post-test

Variables	Pre-Test		Post-Test		T	Sig
	M	SD	M	SD		
Passing and Catching	5.33	4.45	11.22	4.54	1.81	0.087
Dribbling	38.27	3.77	29.72	6.42	2.50	0.023
Shooting	11.278	3.723	23.778	4.18	7.90	0.000
Creative thinking	14.76	3.53	18.83	3.22	3.74	0.008

Based on Table (4), it is evident that there are significant statistical disparities between the pre-and post-tests of the experimental group in the research variables (handling and receiving from the level of the head and the drum, correction of stability, and creative thinking), with the post-tests showing better results. The researchers ascribe this development to the impact of the exercises employed by the researchers using the Barnes technique. These exercises had a positive effect on enhancing skill performance and learning for the experimental group, albeit to varying degrees. This can be attributed to the specificity of the method used, which

relies on engaging learners through excitement and critical thinking. This is achieved by asking multiple questions related to the skill being learned, encouraging learners to reformulate the skill using their abilities, and creating mental images of the skill. These processes stimulate creative thinking, including attention, perception, and thinking. Additionally, learners are actively involved in planning and implementing strategies for acquiring the skill, which ultimately leads to the successful transfer of knowledge. In the traditional technique, the imitator's responsibility is to faithfully replicate the model provided by the teacher. However, in the position of a producer, the imitator must go beyond mere replication and engage in critical thinking to fully understand and internalize the task before executing it. The performance aligns with the assertion made by Mitchell, Oslin, and Gryphon (2020) that thinking plays a crucial role in resolving the challenges at hand. The learner must possess an understanding of the various components of the scenario at hand in order to effectively navigate and adapt to the ever-changing conditions. Only with a comprehensive awareness of all the variables of the situation can one engage in accurate and effective thinking. The variations in performance can be attributed to the application of the principle of gradual progression in motor skill acquisition. This involves sequentially providing exercises, starting from simple tasks and gradually progressing to more complex ones, accompanied by clear explanations. The school adopts this method, which is based on established scientific principles, and emphasizes consistent practice and the inclusion of diverse exercises. The applied exercises offer a range of alternatives for utilizing the instruments, and the execution of skill proficiency. Varying circumstances and settings have facilitated the learner in managing and directing the course of their performance, while also enabling pupils to engage in language repeats in their native tongue using the Barnes technique. Within the practical realm of the educational unit, the consistent and repetitive practice of each exercise serves as a catalyst for enhancing skill performance and proficiency. According to Siedentop, Hastie, and Van der Mars (2019), an essential requirement for improving motor skills is a strong interest in increasing the frequency and diversity of repetitive exercise attempts. This leads to a more seamless and effortless execution of movements. These factors resulted in a positive impact on the learning process, confirming part of the first hypothesis. The hypothesis states that there are statistically significant differences between the pre-and post-tests for the experimental and control groups in learning offensive handball skills. The researchers also attribute the differences to the fact that setting educational goals and informing students about them in advance enhances students' awareness of learning. This is because the success of the educational process largely depends on the interaction between the teacher and the learner, specifically their mutual involvement in planning and implementing the educational process to achieve effective and meaningful learning. These factors have had a positive impact on the experimental group's skills in learning handling, receiving, and patting. This aligns with Kao's (2019) assertion that the primary focus of the educational process is the direct interaction between the instructor and pupils. This relationship can be seen as the pivotal factor determining the success or failure of the educational process.

View the results of the post-tests for the two groups control and experimental, and analysis.

Table 5: Shows the arithmetic means, standard deviations, and the value of (T) to indicate the differences for the post-tests of the control and experimental groups.

Variables	Experimental		Control		T	Sig
Passing and Catching	11.22	4.54	7.44	3.43	2.814	0.008
Dribbling	29.72	6.42	34.16	6.47	2.067	0.046
Shooting	23.77	4.18	13.44	5.37	6.441	0.000
Creative thinking	18.83	3.22	19.56	3.43	5.12	0.000

The data presented in Table (5) demonstrates notable disparities between the control group and the experimental group in the post-tests, favouring the experimental group. The researchers attribute this discrepancy to the implementation of the educational method known as Barnes, which positively influenced the enhancement and advancement of the skill of handling and receiving, as well as the correction of stability. This method also had a significant impact on the motivation to learn among students and their concentration on the acquired skill. This aligns with the findings of Woods and Butler (2020) that internal motivation plays a crucial role in enabling individuals to overcome challenges and obstacles that demand increased effort, courage, and determination. It can also stem from the enjoyment derived from the smooth and consistent execution of tasks, or from external sources of motivation that stimulate and guide behaviour towards practising or performing in sports. The researchers also ascribe these disparities to the implementation of an educational approach grounded in robust scientific principles to attain educational objectives, as well as the inclusion of educational queries at the outset of the instructional segment of the educational module. This resulted in heightened motivation and engagement among learners, as the exercises employed in this manner were employed at the commencement of the educational section. Engaging in these exercises will facilitate the learner's acquisition of information and subsequent encoding into their short-term memory individual accessing the educational content (Lang, 2021). The educational curriculum developed by the researchers had a significant impact on the experimental group's progress in all the skills. This impact was evident in the increased participation of learners and their shift from being passive recipients to being more engaged, enthusiastic, impulsive, and self-confident. This educational style was implemented through the inclusion of the curriculum in educational units and the use of practical exercises. These exercises played a positive role in helping learners achieve their goals. When considering the nature of a learned skill, it becomes apparent that its success in performance and motor skills is closely tied to the ability of students to retain and retrieve the skill. Furthermore, students who actively engage their mental processes during the learning process are more likely to learn effectively compared to those who do not. It impacts the growth of their cognitive abilities, including their capacity for visualisation, self-assurance, concentration, relaxation, and motivation. The educational curriculum prepared by the researchers had a significant impact on the experimental group's progress in all the skills. This impact was evident in the increased participation of learners and their shift from being passive recipients to being more engaged, enthusiastic, impulsive, and self-confident. This educational style was reflected in

the inclusion of the curriculum in educational units and the implementation of practical exercises. These exercises played a positive role in helping learners achieve their goals. When considering the nature of a learned skill, it is important to understand that successful performance and motor skills are key. These skills allow students to retain and retrieve what they have learned. Additionally, students who engage in their mental processes during the learning process tend to learn more effectively compared to those who do not. It impacts the growth of their cognitive abilities, including their capacity for visualization, self-assurance, concentration, relaxation, and motivation. Singh (2022) asserts that creative thinking plays a crucial role in enhancing the execution of sports skills, as it facilitates the attainment of a cognitive state that inhibits the intrusion of detrimental and unfocused thoughts during sports activities. Hence, the psychological state significantly influences the precision of movement performance, particularly in sports movements. The athlete's psychological experiences greatly impact their movements, making psychological preparation a crucial component of physical abilities and skills, particularly at advanced levels. This preparation involves fostering a competitive spirit and managing anxiety and fear (Duclos-Bastías et al., 2021). Thus, offering learners the chance to utilize this contemporary educational approach, resulted in learners who had access to it outperforming those who did not. Learning in this style provides students with the opportunity to actively participate in the educational unit, which contributes to their development, self-potential, and self-confidence. As a result, the experimental group outperformed the control group in acquiring three research skills and enhancing their creative thinking abilities.

CONCLUSIONS

1. The modules included using the Barnes method can improve the skill performance of learners for the three offensive skills.
2. The use of educational units in the Barnes style had a positive impact on the development of creative thinking and learning offensive skills with handball in a way that exceeds the group that used the method.
3. The use of this educational method increased the motivation and enthusiasm of students as well as focusing their attention towards addressing the motor performance of the displayed skill
4. Learning using modern methods from the Barnes method makes students more interesting, loving, and self-confident, expressing their ideas, and exchanging their views while increasing the understanding of the learner's skill more than the traditional way of learning.

RECOMMENDATIONS

Based on the researchers' findings, the following recommendations are made:

1. Implementing the use of instructional units prepared by researchers, following the Barnes technique, which has been demonstrated to be successful on second-stage students at the College of Physical Education and Sports Sciences at the University of Thi-Qar.
2. Focus on implementing this educational approach to acquire offensive skills other games have a beneficial influence on enhancing the degree of learning.

3. Encouraging physical education teachers to incorporate contemporary teaching methods and depart from conventional approaches within their instructional modules for different sports.
4. Performing a correlational study to examine the association between Barnes' style of knowledge and various other factors including numerous competencies, personality traits, emotional compatibility, creative ability, and other variables.

REFERENCES

1. Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The qualitative report*, 13(4), 544-559.
2. Brem, A., Viardot, E., & Nylund, P. A. (2021). Implications of the coronavirus (COVID-19) outbreak for innovation: Which technologies will improve our lives?. *Technological forecasting and social change*, 163, 120451.
3. Burhaein, E., Tarigan, B., Budiana, D., Hendrayana, Y., Phytanza, D. T. P., Lourenço, C., ... & Festiawan, R. (2021). Dimensions in the learning implementation and strategies of adapted physical education for children with special needs during the covid-19 pandemic: a literature review & grounded theory. *Sport Science*, 15(1), 189-201.
4. Chen, X. M. (2021). Integration of creative thinking and critical thinking to improve geosciences education. *The Geography Teacher*, 18(1), 19-23.
5. Chilisa, B. (2019). *Indigenous research methodologies*. Sage publications.
6. Clanton, R. E., & Dwight, M. P. (1996). *Team handball: Steps to success*. Human Kinetics.
7. Doyle, T. (2023). *Helping students learn in a learner-centered environment: A guide to facilitating learning in higher education*. Taylor & Francis.
8. Duclos-Bastías, D., Vallejo-Reyes, F., Giakoni-Ramírez, F., & Parra-Camacho, D. (2021). Impact of COVID-19 on sustainable university sports: Analysis of physical activity and positive and negative affects in athletes. *Sustainability*, 13(11), 6095.
9. Feu, S., García-Rubio, J., Gamero, M. D. G., & Ibáñez, S. J. (2019). Task planning for sports learning by physical education teachers in the pre-service phase. *PloS one*, 14(3), e0212833.
10. Hess, G. F. (2002). Heads and hearts: The teaching and learning environment in law school. *J. Legal Educ.*, 52, 75.
11. Hussein, A. T., & Kasim, M. A. (2022). The Effect Of Applying The Strategy Of Educational Scientific Pillars On The Level Of Performance Of SWOMe Handball Skills Among Players Misan University. *American Journal of Research in Humanities and Social Sciences*, 15, 51-63.
12. Istance, D., & Paniagua, A. (2019). Learning to Leapfrog: Innovative Pedagogies to Transform Education. *Center for Universal Education at The Brookings Institution*.
13. Kadhlm, A. N., & Kareem, A. P. D. A. (2023). The Effect Of Skill Training On The Development Of Agility And Some Complex Skills Ending In Handball Shooting For Youth. *Semiconductor Optoelectronics*, 42(1), 1568-1578.
14. Kao, C. C. (2019). Development of team cohesion and sustained collaboration skills with the sport education model. *Sustainability*, 11(8), 2348.

15. Kasim, M. A. (2022). Effects Of Together Learning On University Students To Achievement Motivation. *Open Access Repository*, 8(05), 57-65.
16. Kasim, M. A. (2022). Evaluation Implementing Cooperative Learning In Physical Education College Programs To Basic Handball Skills Learning In Universities Iraqi. *ResearchJet Journal of Analysis and Inventions*, 3(04), 289-297.
17. Lang, J. M. (2021). *Small teaching: Everyday lessons from the science of learning*. John Wiley & Sons.
18. Lidor, R., Falk, B., Arnon, M., Cohen, Y., Segal, G., & Lander, Y. (2005). Measurement of talent in team handball: the questionable use of motor and physical tests. *The Journal of Strength & Conditioning Research*, 19(2), 318-325.
19. Mitchell, S. A., Oslin, J. L., & Griffin, L. L. (2020). *Teaching sport concepts and skills: A tactical games approach*. Human Kinetics.
20. Mitchell, S. A., Oslin, J. L., & Griffin, L. L. (2020). *Teaching sport concepts and skills: A tactical games approach*. Human Kinetics.
21. Mitchell, S. A., Oslin, J. L., & Griffin, L. L. (2020). *Teaching sport concepts and skills: A tactical games approach*. Human Kinetics.
22. Renshaw, I., & Chow, J. Y. (2019). A constraint-led approach to sport and physical education pedagogy. *Physical Education and Sport Pedagogy*, 24(2), 103-116.
23. Salih, M. M. M., Hashim, R. S., & Kasim, M. A. (2021). Forecasting Achievement Sports through Cooperative Learning in Handball Training in Physical Education. *Annals of Applied Sport Science*, 9(3), 0-0.
24. Salih, M. M. M., Hashim, R. S., & Kasim, M. A. (2021). Forecasting Achievement Sports through Cooperative Learning in Handball Training in Physical Education. *Annals of Applied Sport Science*, 9(3), 0-0.
25. Schmidt, R. A., & Wrisberg, C. A. (2008). *Motor learning and performance: A situation-based learning approach*. Human kinetics.
26. Schmidt, R., & Lee, T. (2019). *Motor learning and performance 6th edition with web study guide-loose-leaf edition: From principles to application*. Human Kinetics Publishers.
27. Siedentop, D., Hastie, P., & Van der Mars, H. (2019). *Complete guide to sport education*. Human Kinetics.
28. Singh, R. (2022). *Sports psychology*. KK Publications.
29. Valério, C., Farias, C., & Mesquita, I. (2021). Pre-service teachers' learning and implementation of student-centred models in physical education: a systematic review. *Journal of Physical Education and Sport*, 21(6), 3326-3338.
30. Vaughan, J., Mallett, C. J., Davids, K., Potrac, P., & López-Felip, M. A. (2019). Developing creativity to enhance human potential in sport: A wicked transdisciplinary challenge. *Frontiers in psychology*, 10, 2090.
31. Visnapuu, M., & Jürimäe, T. (2009). Relations of anthropometric parameters with scores on basic and specific motor tasks in young handball players. *Perceptual and motor skills*, 108(3), 670-676.
32. Vveinhardt, J., Fominiene, V. B., & Andriukaitiene, R. (2019). "Omerta" in organized sport: bullying and harassment as determinants of threats of social sustainability at the individual level. *Sustainability*, 11(9), 2474.
33. Woods, R., & Butler, B. N. (2020). *Social issues in sport*. Human Kinetics Publishers.