Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

Effect of Small Games to Developing Coordination, Motor Flexibility, and Volleyball Setting Skills for Students

Asst. Lec. Tahseen Hamzah Najm [(1)], Asst. Lec. Abbas Hatem Alwan [(2)]

[(1),(2)] General Directorate of Education in Babylon / Ministry of Education.

thsynhmzt59@gmail.com , bhatm5518@gmai.com

Abstract

The importance of the research in preparing a curriculum with mini games lies in the development of coordination, motor flexibility and volleyball setting skill for students.

As for the research problem: it focused on the lack of use of small games in the teaching process, which is clearly reflected in the level of performance of the individual learners, as well as the need for diversity in methods of presenting the educational material and the learning process proceeds by adding excitement and suspense to move away as much as possible from boredom and routine and in an effort to try to involve students and giving them interactive and positive roles in methods of skill display, this leads to a weakness in their mobility and skill abilities in various activities and sports scheduled for them within the educational curriculum decided by the Ministry of Education, and on this basis the researchers decided to develop a curriculum that includes small games trying to develop coordination, motor flexibility and the setting skill of volleyball for students.

The objective of the research is to identify the effect of small games in developing coordination, motor flexibility and volleyball setting skill for students.

The researchers used the experimental method by designing (the two equal groups) with the two pre and post-tests due to its suitability to the nature of the research, the researchers selected the main research sample from the research community of (28) students, and they were divided equally into two groups, one of which was randomly conducted, using a lottery method, with (14) students, and the other was control, with (14) students as well, The homogeneity of the research sample was done and the experimental and control groups were equal. In all dependent search variables.

The researchers concluded that small games have a positive effect and role in developing coordination, motor flexibility and setting skill of volleyball for students. Researchers also recommend adopting the educational curriculum of small games in developing compatibility, kinetic flexibility and preparation skill in volleyball for students.

Introduction:

Small games are one of the methods of teaching different games and sporting events. Through them, the learner can acquire motor skills faster and more interestingly, because they are characterized by the availability of the elements of motivation, enthusiasm and competition and provide opportunities to acquire the technical skills of the game and get acquainted with the law of the game, and it is suitable for different age groups and for both genders, taking into

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

account that the different growth characteristics of each age group agree in terms of ease and complexity, and the practice of these games is one of the important means that contribute to learning motor skills in games and sports events.

Small games are an important part of educational and applied activity, as they represent a prominent place among the various games and multiple activities, and constitute an important space in training in motor skills, physical and psychological skills ... and others to reach the best results in development and achieve an advanced level of performance, in addition to that. Hence, the need to search for a curriculum that suits the nature of students in the middle school and affects coordination, motor flexibility and setting skill of volleyball for students.

Researchers have identified the problem of their research, which is the lack of use of small games in the teaching process, which is clearly reflected in the level of performance of individual learners, as well as the need for diversity in ways of presenting the educational material and the learning process proceeds by adding excitement and excitement to move away as much as possible from boredom and routine and in an effort to try to involve students And giving them interactive and positive roles in methods of skill display, this leads to a weakness in their movement and skill abilities in various activities and sports scheduled for them within the educational curriculum decided by the Ministry of Education, and on this basis the researchers decided to develop a curriculum that includes small games trying to develop coordination, motor flexibility and the skill of setting volleyball for students. The research aimed at: preparing small volleyball games, as well as identifying small games in developing coordination, motor flexibility and setting skill in volleyball for students, and the researchers hypothesized that there is a positive effect of small games in developing coordination, motor flexibility and setting skill in volleyball for students. As for the fields of research: the human field was: second grade students, intermediate from 10/12/2020 until 14/2/2021, in the volleyball court for a middle school, Tareeq Al eman .

Research methodology and field procedures:

Research Methodology:

The researchers used the experimental method as it is compatible with the nature of the research problem, and they also chose to design the method of the equivalent groups (experimental and control) with the pre and post- tests.

Community and sample research:

The research community was determined by the second intermediate students of the Tareeq Al eman School / Babylon Governorate for the academic year (2020-2021), and their number (65) students, due to the availability of research requirements in it, they were distributed as follows: -

- **The exploratory sample**: The exploratory research sample was (9) students.
- **The main sample**: The main sample: The sample was chosen from the second intermediate students of the Tareeq Al eman School / Babylon Governorate for the academic year (2020-2021), and their number (28) students, this sample was divided by

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

simple random method and by lot method, into two groups, one of them is experimental and the other is control , they are equal by number and size of (14) students each.

The homogeneity of the sample and the equivalence of the two research groups:

Sample homogeneity:

Before starting the implementation of the curriculum vocabulary small games prepared by researchers, and in order to control the variables that affect the accuracy of the research results, the researchers resorted to verify the homogeneity of the research sample in the variables related to the morphological measurements, namely (Length, body mass and age) as shown in table (1).

Table (1) show the homogeneity of the research sample shows variables (Length , body mass, and age).

N	Variables	Measuring unit	Mean	Std. Deviation	Mode	Skew ness
1	Length	cm	147.2	1.47	146	0.88
2	Mass	Kg	45.75	1.14	45	0.67
3	Age	Year	14.26	0.97	14	0.76

Through the results of Table (1), it shows that the torsion modulus values are less than (+1), which indicates the homogeneity of the research sample in the variables (Length, body mass, and age).

Devices, tools and means used in the research:

Means of data collection:

- Arab and foreign sources and the internet.
- Personal interviews.
- Tests and measurements.
- Questionnaire.
- Note.

Tools and devices used:

- A volleyball court.
- (10) Mikasa flying balls.
- Colored tapes, colored tape, and tape measure (M).
- Dyes and chalk.
- Ordinary ropes.
- Rubber ropes.
- Rules for colored numbers.
- A ground ladder made of ropes.
- Colored signs.
- Smooth wall.
- Two (2) tennis balls.
- Manual stopwatch, number (2).

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

- Manual electronic calculator, number (1).
- A medical scale (kg) to measure weight.
- One (1) laptop computer.
- Data registration forms.

Field research procedures:

Determine the tests for the skills studied:

Movement coordination between the eyes and arms test:

First: Bend the trunk back from lie flat test : [(1)]

The purpose of the test: To measure the posterior flexibility of the spine.

Tools: Tape measure, apron, registration form assistant.

Performance description: From the lie flat position, the arms behind the back with the lower limb fixed by a colleague, the tester pulls the torso back slowly to the maximum extent he can and is stable for two seconds, the distance is measured from the bottom of the chin to the level of the ground with a tape measure so that the tape is in a perpendicular position on the ground and in front of the head of the laboratory during the measurement, with the zero touching the ground.

Register : Each tester has two attempts with the best of both scoring.

Second: The numbered circuits test: [(2)]

The purpose of the test: To measure the coordination of the movement between the eyes and the legs.

Tools: a stopwatch. On the ground, (8) circles are drawn, each with a diameter of 60 cm, and the circles are numbered from (1 to 8).

Performance description: The test student stands inside the circle (1) and when he hears the start signal, he will jump according to the circle (2), then (3) .... until the end of the circle (8), and the jump is with the two legs together.

Register: Record the time taken for the lab to travel over the eight circuits, per second.

A test Technical performance evaluation from overhead setting of volleyball:

The purpose of the test: to evaluate the technical performance of the setting from above the head forward through the appearance of the skill.

Tools used: A miniature volleyball court, (3) volleyballs, and a pre-prepared performance evaluation form.

Performance description: The tested student stands in the designated area to pass between the two centers (2,3), to lead the setting from above the head to forward and for three consecutive attempts.

Register: Three assessors evaluate the three attempts for each tester by presenting the test videotapes to them, and he grants three scores for each evaluator, noting that the final evaluation score for each attempt is (10) degrees, after which the best score is chosen for each evaluator, and through extract the arithmetic mean of the three best scores, the final score is extracted for each tester.

The total score of the test: - (10) scores, as shown in figure (1).

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

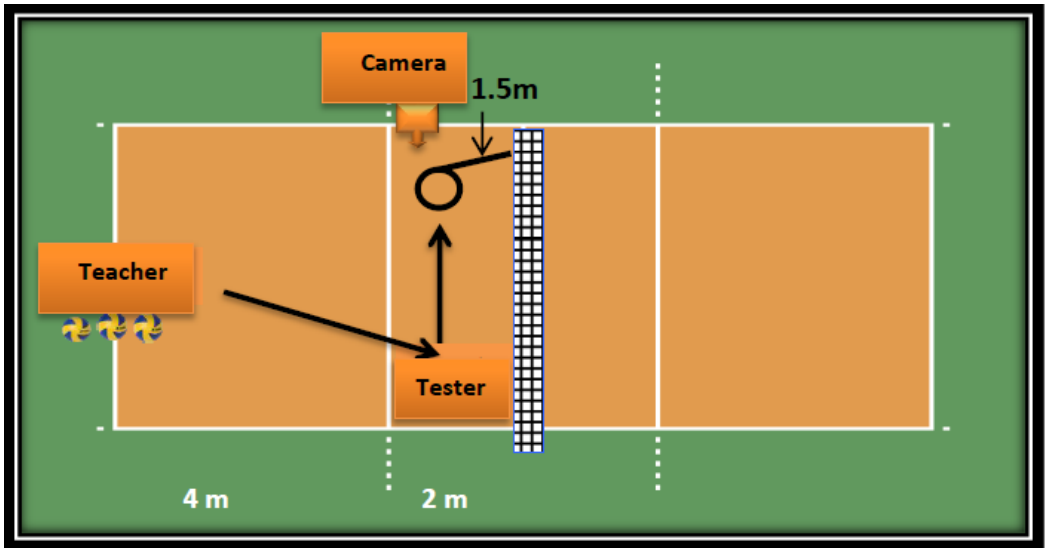

Figure (1) shows the technical performance test for overhead setting.

Main experience:

Pre- tests:

Researchers conducted pre-tests on the control and experimental groups, as tests of compatibility, mobility flexibility and technical performance were conducted on 16/12/2020 in the sports arena at Tareeq Al-Iman intermediate school, the researchers used the method of performing the skill and evaluating it after recording it manually by (cd) and then presenting it to the assessors to analyze it and record the results of the evaluation of the technical performance through the pre-prepared evaluation forms, the pre-tests were carried out with the help of the auxiliary work team, and under the direct supervision of the researchers, who followed the following steps when conducting the pre-tests:

- Configuring devices, tools, and requirements for carrying out all tests.
- Configuring the assisting work team and providing forms for recording evaluation results.
- Adequate explanation of the members of the research sample on how to perform the tests.
- Display the tests in front of the research sample.
- Giving students an appropriate time to warm up before starting to apply the tests.

Implementation of the curriculum vocabulary with small games:

The researchers prepared a curriculum with small games, and the implementation of the vocabulary of this curriculum was started on 20/12/2020, on the main experiment sample consisting of (28) students from Tareeq Al Iman intermediate school, as follows: -

- The duration of implementation of the curriculum vocabulary is (4) weeks.
- The number of educational units per week is two educational units.
- The total number of educational units is (8) units.
- The time for the educational unit is (40) minutes.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

- The curriculum vocabulary was implemented with small games by the experimental group through the educational units within the curriculum scheduled for second-grade intermediate students, and it was implemented by a teacher who studied physical education, and under the direct supervision of researchers.
- In developing the curriculum vocabulary with small games, the researchers took into account the following: -
  1-The variety of small games to prevent the state of boredom and boredom that may afflict the experimental group students.
  2-The gradation from easy to difficult in the implementation of small games of motor abilities and artistic performance.
  3-Skills are learned by breaking the skill and then linking the parts that have been learned to form an integrated performance.
- The usual curriculum followed on the control group was implemented and applied by the physical education teacher himself.
- The implementation of the educational units' vocabulary, the curriculum, was completed with small introductory games on 17/1/2021.

Post-test:

After completing the implementation of the curriculum vocabulary with small games, the post-tests were conducted on the control and experimental groups, as tests of technical performance, compatibility and movement flexibility were conducted on 01/21/2021 in the sports arena in the Tareeq Al Iman intermediate school, the researchers sought to create the same conditions in terms of time, place, devices, tools, method of implementation, and the assisting work team in order to work as much as possible to find the same or similar conditions in which the pre-tests were conducted.

Statistical methods used:

- Mean.
- Median.
- Mode.
- Std. Deviation.
- (T) test for symmetric samples.
- (T) test for independent samples.

Presentation, analysis and discussion of results:

Presenting and discussing the results of the pre and post tests for the control and experimental groups for the variables under discussion:

Presentation of the results of the differences between the pre and post tests for coordination, motor flexibility and setting skill of volleyball for the control group:

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

Table (2) show the arithmetic mean, standard deviations, and (t) values calculated between the pre and post tests for coordination, motor flexibility, and volleyball setting skill for the control group.

N	Variables	Measuring unit	Pre-test		Post-test		Value (T) Calculated	Level sig	Type sig
			Mean	Std. Deviation	Mean	Std. Deviation			
1	Movement coordination between the eyes and arms	Number	4.92	0.68	6.51	0.50	3.24	0.000	Sig
2	Motor flexibility	Cm	6.11	0.57	6.86	0.77	2.94	0.002	Sig
3	Technical performance of volleyball setting skill	Degree	4.78	0.31	6.64	0.46	14.78	0.001	Sig

Presentation of the results of the differences between the pre and post-tests for coordination, motor flexibility, and setting skill in volleyball for the experimental group:

Table (3) show the arithmetic mean, standard deviations, and (t) values calculated between pre and post-tests for coordination, motor flexibility and volleyball setting skill for the experimental group.

N	Variables	Measuring unit	Pre-test		Post-test		Value (T) Calculated	Level sig	Type sig
			Mean	Std. Deviation	Mean	Std. Deviation			
1	Movement coordination between the eyes and arms	Number	5.17	0.94	7.92	0.87	4.45	0.001	Sig
2	Motor flexibility	Cm	6.45	0.59	7.97	0.44	3.68	0.000	Sig
3	Technical performance of volleyball setting skill	Degree	4.80	0.44	7.81	0.27	38.63	0.000	Sig

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

Presentation of the results of the differences between the dimensional tests of coordination, motor flexibility, and volleyball setting skill between the two groups:.

Table (4) show the arithmetic mean, standard deviations, and (t) values calculated between the post- tests for coordination, motor flexibility and volleyball setting skill between the two groups.

N	Variables	Measuring unit	Control		experimental		Value (T) Calculated	Level sig	Type sig
			Mean	Std. Deviation	Mean	Std. Deviation			
1	Movement coordination between the eyes and arms	Number	6.51	0.50	7.92	0.87	5.68	0.001	Sig
2	Motor flexibility	Cm	6.86	0.77	7.97	0.44	6.47	0.000	Sig
3	Technical performance of volleyball setting skill	Degree	6.64	0.46	7.81	0.27	4.58	0.000	Sig

Discuss the results:

Through the results presented in tables (2,3) that showed the presence of significant differences between the pre and post tests for some of the variables studied and in favor of the post-tests, and for both the control and experimental groups, the researchers attribute the reason for the differences between the pre and post tests for the control group to the use of various exercises and with many repetitions prepared by the teacher, and this is consistent with what has been mentioned that the use of "exercises and games in the physical education lesson leads to stimulation of the nervous and physical system, and it plays an influential role in the development of The psychological aspects of accepting the parts of the lesson with happiness, joy and joy, which generates motivation and a tendency to practice sports " [(3)], as for the experimental group, researchers attribute the reason for this to the application of the curriculum by members of this group with small games and the importance of this in developing motor abilities (coordination and motor flexibility), which are among the abilities that have an important effect in all sports, as they are of great importance to students in their daily life as a whole. In general, and any sporting activity that he does in particular, and that the availability of these motor abilities of any student is an essential and effective element in raising learning degrees to the best level, and this was made by small games and their effective and important role in developing these abilities among the members of the experimental group. Developing the neuromuscular compatibility and providing the individual with multi-faceted motor experiences[(4)].

As for the volleyball preparation skill, the researchers attribute the reason for the moral difference to the members of this group applying the curriculum with small games and inserting them within the educational units, which led to a good response by the students and the

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

development of their skill performance and this confirms that the students "do not respond to the learning process in one way and that it is New and different educational methods must be used to build and develop students' abilities and knowledge"[(5)], in addition to the various and interesting skills exercises included in the educational units, their application of them in the form of small games helped them in developing the technical performance of the preparation skill, and this goes with what was emphasized that the use of "various and targeted games have a positive effect on developing the skill" [(6)], the application of these games focused on the pupils of this group to perform complex and varied movements aimed at influencing the skillful side of them, and this is consistent with what has been mentioned that "when implementing the educational mini-games effectively, the general performance of the learners is greatly improved and then they can gain an additional benefit. It is the development of new learning on how skills are learned " [(7)].

And through the results of tables (4), which show the presence of significant differences in the post-tests of the studied variables and in favor of the experimental group, the researchers attribute the reason for the differences and these development rates to the adoption of the curriculum with small games and their application by the members of the experimental group, as the good selection of the type of small games gave students freedom of movement and movement with good fluidity and agility, as well as interacting with the atmosphere of the educational unit in a spirit of excitement and suspense without the appearance of boredom or fatigue during the performance, This is consistent with what has been mentioned that "movement develops with regular sports training as a result of the development of the mental and intellectual level, the development of physical and motor characteristics in addition to an increase in the stored movement experiences in the brain"[(8)].

The researchers also attribute the reason for the development of the experimental group in the post-tests to the targeted kinematic variables for the influencing role of small games, and this indicates that the implementation of the curriculum proceeded in an accurate and programmed manner to develop these abilities, as "the practice of playing and exercises when left to chance cannot achieve educational goals, but on the contrary where it should achieve the learner's play through purposeful education that takes into account the characteristics of individual growth [(9)], in addition to the kinetic experiences gained from the curriculum and its contents for this important age group, as the content of any curriculum represents the basic and main part of the curriculum and a tool to achieve its objectives, and therefore the success of the educational and educational process depends to a large extent on this content, and this is what the sources confirmed that "the content of the approach One of the important steps in achieving his goals" [(10)].

Conclusions and recommendations:

Conclusions:

- The experimental group achieved more progress than the control group in the post-tests.
- Small games have a positive effect and role in developing coordination, motor flexibility and setting skill in volleyball for students.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11334 - 11343
Received 05 March 2021; Accepted 01 April 2021.

Recommendations:

- Researchers recommend adopting the educational curriculum with small games to develop compatibility, mobility flexibility and volleyball preparation skill for students.
- The need to pay attention to and train motor abilities during the educational units because of their great role in learning basic skills and developing their accuracy.
- The need to pay attention to introducing small and introductory games in learning other volleyball skills and developing the accuracy of its performance in particular and the skills of sports in general and for both genders.
- Conducting further research and studies with the aim of investigating the impact of small and introductory games on the different levels of volleyball and other sports for both gander.

References:

1. Hussein Alaa Abd Al-Hussein Yaqoub: The effect of a curriculum with small games and introductory mini-volleyball in reducing levels of aggressive behavior and developing some movement and skill abilities for students aged (11-12) years, Master Thesis, University of Babylon / College of Physical Education and Sports Sciences, 2019
2. Ali Al-Dairi and Ahmed a blanket: (1987); Methods of Teaching Physical Education, Amman: Dar Al-Amal for Publishing and Distribution.
3. Qasim Al-Mandalawi (and others): (1990);Tests, Measurement and Evaluation in Physical Education, Mosul, Higher Education Press.
4. Mohammed Jassim Al-Yasiri and Marwan Abdul Majeed: (2002); Statistical methods in the fields of educational research, 1st Edition, Amman, Warraq Foundation.
5. Muhammad Hassan Allawi: (1983);Encyclopedia of Sports Games, 3rd Edition, Cairo, Dar Al Maaref.
6. Muhammad Subhi Hassanein: (1995); Measurement and Evaluation, Cairo, Arab Thought House.
7. Mohamed Mahmoud Al-Hela: (1999); Instructional design theory and practice, 1st Edition, Amman, Maisarah House for Publishing, Distribution and Printing.
8. Makarem Helmy Abu Harjah and Muhammad Saad Zaghloul: (2000); Environmental Physical Education between Theory and Practice, 1st Edition, Cairo, Book Center for Publishing.
9. Makarem Helmy Abu Harjah (and others): (2000); Encyclopedia of Field Training for Physical Education, 1st Edition, Cairo, Book Center for Publishing.
10. Nahda Abdel Zaid and others: (2015); modern volleyball and its specialized requirements, 1st Edition, Beirut, Dar Al-Kotob Al-Ulmiah.
11. Wajih Mahjoub. Motor development from birth to old age, C2, Baghdad, Ministry of Higher Education and Scientific Research, 1987.
12. Wadih Yassin Al-Tikriti and Hassan Muhammad Al-Obaidi: (1999); Statistical Applications and Computer Uses in Physical Education Research, Mosul, Dar Al-Kutub.