

DOI: <https://doi.org/10.54702/m17an143>

The effect of the (P.A.K.S.A) strategy on learning the skills of serve and setting in volleyball for female students

Sahar Imran Nasser¹, Lama Samir Hamoudi², Muhammed Asim Muhammed³

1&2 Physical Education and Sport Sciences college for women, University of Baghdad – Iraq

3 Physical Education and Sport Sciences college, Alexandria University – Egypt

Received: 19/10/2023, Revised: 19/03/2024, Accepted: 19/03/2024, Published: 30/06/2024



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/), © Modern Sport

Abstract

The problem of the research lies in the researchers' observation of the female students' performance in the practical field that there is a weakness in learning some basic skills in volleyball, especially the skills of serve and set. Therefore, the researchers decided to prepare educational units using the (P.A.K.S.A) strategy in learning the two skills under study in volleyball for the female students. The research aims to Preparing educational units using the strategy (P.A.K.S.A) in learning the skills of serve and set in volleyball for female students and identifying the effect of the strategy (P.A.K.S.A) in learning the two skills under study and thus knowing the preference of the two groups (experimental and control) in learning the two skills. The research assumed the presence of statistically significant differences between the pre- and post-tests. The control and experimental groups in learning the skills of serve and set in volleyball, as well as the presence of statistically significant differences between the experimental and control groups in the post-tests in learning the two skills under study. The two researchers used the experimental method in the manner of two equal groups with a pre- and post-test with random selection to suit the nature of the research. The research population was determined from the female students of the second intermediate grade in Al-Fadhail Secondary School for outstanding students for the academic year (2022-2023). The sample number reached (24) female students and was divided into two experimental and control groups. (12 female students) for each group, and the educational units were applied using the (P.A.K.S.A) strategy to learn the two skills under study for a period of eight weeks, with two educational units per week, and the time of each unit was (45) minutes. The researchers used the statistical package (SPSS) to process the data and a number of conclusions were reached, the most important of which was that the (P.A.K.S.A) strategy had a positive impact on learning the skills of Serve and Set in volleyball for female students, and the experimental group outperformed the control group in learning the two skills under study. Accordingly, the researchers recommend a number of The most important recommendations were to benefit from the results of the current study when learning the two skills under study, as well as circulating the results of the study to the Ministry of Education due to the necessity of applying the strategy in learning some volleyball skills, especially the skills of serve and set. and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Quality Education).

Keywords | strategy (P.A.K.S.A) - serve - setting – volleyball

Introduction: Achieving the best learning is achieved by following modern and advanced educational strategies that meet society's needs and growing requirements. Sciences are

multiplying amazingly, and the learner must be successful in reaching the desired goal. (Ismail Adham, S., & Al-Zuhairi, N. A.) “The teaching process is an essential pillar of the educational process. During which the desired changes are made in the behavior of individuals and the acquisition of knowledge, values, customs and other patterns of behavior. (8). The (P.A.K.S.A) strategy is one of the strategies that contains a set of sequential and overlapping steps that the learner goes through, and its letters represent each step of the strategy, which are (finding the problem - analyzing the problem - knowing the ideas - choosing the ideas - applying the ideas). Its purpose is to reach a solution to the problem or situation he faces. Here, the learner is relied upon primarily during the educational unit through consultation and discussion within one group, as well as group interaction and cooperation, which makes it easier for the learners to clarify the precise details of the performance of any learned skill and to invest what is a reserve of energies and capabilities. Volleyball is considered a competitive game, as well as being affected, like all other games, by developments in methods and strategies. It is one of the games that has received great attention and thus occupied an important role in the development of its performance and all its aspects. Here the importance of research appears in preparing educational units with the strategy (P.A.K.S.A) in learning the skills of Serve and Set in volleyball in order to make the learning process more useful and objective. An attempt by the two researchers to experiment with this strategy and find out its role in learning the two skills under study in order to reach effective and effective learning. We also find the importance of the two skills under study and the necessity of paying attention to them as they are among the offensive skills through which we achieve victory, as the serve skill is one of the important offensive skills and it is necessary to focus on it, and this is what was confirmed by the study of (Nahida Abdel Zaid) “Without a serve hit it is not possible to The game begins and through

it the player can get a point without his team making any effort” (3). Setting’s skill is also considered one of the basic skills in the game of volleyball in terms of its use and repetition by the players during the course of the game in preparation for delivering the ball to the appropriate place for the performance. Attack process. The prepared player or lifter must be characterized by a high degree of intelligence, focus, and accuracy in order to notice many things and what is going on on the court when he performs the Setting. According to a study by (Schmidt, A. Richard, and Timothy Lee), “The prepared player must have the ability and high efficiency to be able to perform all types of Setting and deliver it to the hitting player accurately so that he can decide the attack in favor of his team” (9). The problem of the research lies in the observation of the two researchers and their practical field presence for volleyball lessons and their long experience. It was found that there is a weakness in learning some basic skills in volleyball, especially the skills of serve and set. Therefore, the researchers decided to apply a modern strategy in addition to it being a strategy that has not been applied in the sports field, which is The P.A.K.S.A strategy is an attempt by us to advance the educational process and reach the best level of skill performance. The research aimed to prepare educational units with the strategy (P.A.K.S.A) in learning the skills of serve and set in volleyball, as well as to know the effect of the strategy in learning the two skills under study, and thus to know the preference of the two groups (experimental and control) in learning the two skills. The research assumed that there were statistically significant differences between the pre- and post-tests and for the control and experimental groups in learning the skills of serve and set in volleyball, as well as the existence of statistically significant differences between the experimental and control groups in the post-tests in learning the two skills under study. The study was carried out on the second-intermediate female students at Al-Fadhael High School for

Outstanding Female Students for the academic year (2022-2023) for the period from 4/2/2022 to 30/3/2022. In the school yard of Al-Fadhael Secondary School for Outstanding Female Students/Baghdad Governorate/Rusafa Third Education.

Method and procedures:

The researchers used the experimental method in the style of the experimental and control groups with a randomly selected pre- and post-test to suit the nature of the research. The research population was determined by the second intermediate female students in Al-Fadhael Secondary School for outstanding students for the academic year (2022-2023), who numbered (101)

students, and (24) female students were chosen randomly and by lottery method to represent the main experiment sample. The sample was divided into two groups, experimental and control, with (12) groups. Female students) for each group. The experimental group represents Division (A) and the control group represents Division (C). Thus, the percentage of the main experiment sample reached (23.76%) of the total original population. In addition, (6) female students were selected randomly and by lottery from Section (B) to represent the exploratory experiment sample, with a percentage of (5.94%).

Sample homogeneity:

Table .1 shows the homogeneity of the research sample members

B	Measuring unit	Arithmetic mean	Mediator	Standard deviation	skewness coefficient
Height	Meter	142.231	140.000	1.387	0.244
mass	Kg	40.274	40.000	1.554	0.233
Age	Year	13.410	14.000	1.786	0.393

The value of the skewness coefficient is limited to ± 3 , which indicates a moderate distribution of the population

Methods of collecting information: (observation, tests and measurements, Arabic and foreign sources and references).

Equipment: Tools used in the research: (a legal volleyball court with its accessories, (12) legal volleyballs, (2) Japanese-made (Casio) stopwatches, (1) measuring tape, (1) video camera with a frequency speed of 500 images per second. Japanese-made, Dell laptop (1). Electronic medical scale (1).

Tests used in the research:

1-Serve test to the other side of the field (Basma Naeem) (6)

Purpose of the test: to measure the level of skill performance of the serve facing from below by experts.

Tools: Legal volleyball court - 3 volleyballs.

Description of the test: The tester stands behind the end line and serves, facing from below, so that the ball crosses to the other side of the court.

Number of attempts: 3 attempts

Registration: The laboratory's performance in the three attempts is evaluated by experts, and the grade division is as follows:

- Preparatory section: 3 degrees
- Main section: 5 marks
- Final section: 2 marks

The final grade is calculated by calculating the arithmetic mean score for the three attempts, noting that the total score is (10) points

Second/ passing test from above on the wall: (Basma) (6)

Purpose of the test: to measure the level of skill performance of the skill of passing from above through experts.

Tools: Legal volleyball court - three volleyballs - smooth wall

Description of the test: The tester stands in front of a wall and performs continuous manipulation from above towards the wall.

Number of attempts: 3 attempts

Registration: The laboratory's performance in the three attempts is evaluated by experts, and the grade is divided as follows: -

Preparatory section: 3 degrees

Main section: 5 degrees

Final section: 2 marks

The final grade is calculated by extracting the arithmetic mean score for the three attempts, noting that the total score is (10) points.

Exploratory experiment: The two researchers conducted the exploratory experiment on (6) female students on 2/4/2022 in the courtyard of

Table .2 shows the equality of the experimental and control groups in the study variables

Variables	Experimental group		Control group		Calculated t value	Error level	Type sig
	Mean	Standard deviation	Mean	Standard deviation			
Serve	4.786	1.124	4.647	1.276	0.821	0.853	Non sig
Setting	4.779	1.431	4.973	1.482	0.761	0.577	Non sig

D below significance level ≤ 0.05

Implementing the strategy (P.A.K.S.A):

- Implementation of the educational units began on 10/2/2022 and ended on 27/3/2022.
- Duration of the educational curriculum (8 weeks)
- The number of educational units per week is (2) units
- The total number of units is (16) educational units
- Curriculum implementation days are Sunday and Tuesday.
- The time of one educational unit is (45) minutes.

The educational unit included the following:

Al-Fadhael Secondary School for Outstanding Female Athletes/Baghdad Governorate/Rusafa Third Education. The purpose of the exploratory experiment was:

- The suitability of the devices and tools used in the research.
- The time taken to conduct the tests.
- Identifying the times for implementing the educational curriculum and the timing of each exercise.
- Knowing the difficulties that researchers may encounter when conducting the main tests.

Pre-tests: The two researchers conducted pre-tests for the skills Serve and Set on 2/7/2022 in the courtyard of Al-Fadhael Secondary School for Outstanding Female Athletes/Baghdad Governorate/Rusafa Third Education School. Equivalence was found between the experimental and control research groups in the variables of the study. The results showed the equality of the two groups, and Table (2) shows this.

- Set-up section: Its duration is (10) minutes and includes the introduction and general warm-up for all muscle groups and physical exercises for specific muscle groups.
- The main section: Its time is (30) minutes and includes.
 - **Educational aspect:** Time (10 minutes): It includes explaining the skill and presenting it to the female students, then dividing the female students into 3 groups, each group containing 4 female students. In this aspect, 4 steps of the strategy were implemented, which are (finding the problem) by asking the students a question to analyze the problem and determine its causes (problem analysis),

to find potential solutions to the problem (knowing ideas), and then choosing the most appropriate solution from among a number of solutions (selecting ideas).

- **The practical aspect:** Its time (20 minutes) includes applying a number of exercises that serve the skill to be learned (the step of applying ideas)

The final section: It is (5) minutes long and includes a recreational game, praising the group whose answers were best, correcting the wrong

Results:

Table .3 shows the results of the pre- and post-tests of the experimental group in the volleyball skill tests under study

Variables	Pre-test		Post-test		Mean difference	Calculated t value	Error level	Statistical sig
	Mean	Standard deviation	Mean	Standard deviation				
Serve	4.786	1.124	6.75	2.810	1.964	7.671	0.000	Sig
Setting	4.779	1.431	6.986	1.737	2.207	6.831	0.000	Sig

Table .4 shows the results of the pre- and post-tests of the control group for the volleyball skill tests under study

Variables	Pre-test		Post-test		Standard deviation of differences	Calculated t value	Error level	Statistical sig
	Mean	Standard deviation	Mean	Standard deviation				
Serve	4.647	1.276	5.621	0.432	0.974	4.445	0.002	Sig
Setting	4.973	1.482	5.831	0.613	0.858	3.787	0.002	Sig

D below significance level ≤ 0.05

Table .5 shows the results of the post-tests of the volleyball skill tests under study between the control and experimental groups

Variables	Experimental group		Control group		Calculated t value	Error level	Statistical sig
	Mean	Standard deviation	Mean	Standard deviation			
Serve	6.75	2.810	5.621	0.432	8.755	0.001	Sig
Setting	6.986	1.737	5.831	0.613	7.989	0.002	Sig

Sig below significance level ≤ 0.05

Discussion:

The tables of pre- and post-tests for the results of the variables investigated for the research sample show that there are significant differences between the pre- and post-tests in the Serve and

answers, giving feedback to the learners, and ending the lesson.

Post-tests: The post-tests for the skills Serve and Set were conducted on 30/3/2022 in the courtyard of Al-Fadhael Secondary School for Female Athletes/Baghdad Governorate/Rusafa Third Education. The researchers took into account providing conditions similar to the pre-tests in terms of (time, place, tools used, and method of conducting the tests).

Set tests for the experimental group and in favor of the post-tests. The two researchers attribute the reason for the results of the experimental group to the educational curriculum prepared with the strategy (P.A.K.S.A) that contributed to the use of

the learners' mental processes, especially thinking. By finding potential solutions and arriving at the most appropriate solution among a number of solutions, this helps them discover mistakes and correct them, and this in turn helps them achieve positive learning results. Coordination between the mental and performance aspects also contributes to understanding and learning the skill better, as the thinking process (Mustafa Hussein Hassan) (is the means for the individual to benefit from his previous experiences as well as employing the experiences of others to reach the best information possible) (2) and the strategy (2). P.A.K.S.A) opens the way for learners to express their ideas without being restricted to produce many ideas, as this strategy focused on (Smith, Patricia, and Raghan) "presenting ideas and discussing the ideas later to choose what is applicable" (10). It was also shown that there were significant differences between the pre- and post-tests. For the Serve and Set tests for the control group and for the post-tests, the two researchers attribute the reason for the control group's superiority to the teacher's method followed, who also achieved positive results in learning the skills of Serve and Set in volleyball. This indicates that the teacher's method was according to scientific foundations, and we should not forget the role of repetition in performing the exercises as well. Learn the two skills under study. As shown in the table, there are significant differences between the experimental and control groups in the post-tests of the Serve and Setting tests, and in favor of the experimental group. The two researchers attribute the reason for the experimental group's superiority over the control group to the fact that the (P.A.K.S.A) strategy had an effective role in learning, to a greater extent than the teacher's method, as it The steps of the strategy emphasize innovation in approaching and handling the situation, as the situation is presented to the learners and stimulates their thoughts, which leads them to search for ideas and information related to the

problem or situation, then analyze it and connect its parts in order to reach the desired goal. The P.A.K.S.A strategy also works on the interaction of learners within one group and cooperation among themselves, as well as competition between groups, and encourages them to present their ideas and challenge each other's ideas. It is also one of the strategies that helps learners rely on themselves in consultation, discussion and dialogue within the group and to give the most appropriate decision. As well as interconnection, interaction and group cooperation, which facilitates the students' clarification of the precise details of the performance of any learned skill and investing in their reserve of energies and capabilities. This is what characterizes the game of volleyball, (Abduljaleel, A. B., & Hamoudi, L. S.) (because of the cooperation, coordination, and integration of roles that lead to achieving the common goals of one team) (5). Continuous training in the skill also contributed to learning it, and this is what was confirmed by (Lama Samir): "Emphasizing focused and continuous training to master the serve skill because of the importance of this skill in developing the level of players and getting teams to the best level and obtaining advanced positions" (1) The learner's performance of the skill and the use of his mental processes will contribute to consolidating the skill in the learner's mind and forming an effective model. The study (Yarub Khayun) indicated that "if the model is effective for the learner, the learner tries to reach this motor behavior by retrieving the model and comparing it with his performance after Every attempt" (4). The researchers also attribute the reason for the experimental group's superiority to the use of modern strategies, which had an important role in learning by arousing the learner's excitement and moving him away from the methods he is accustomed to in learning, and this is what (Dania Salman)pointed out in her study (that The absence of modern strategies in learning and the adoption of familiar educational methods led to fluctuation in learning basic skills and difficulty

in achieving mastery of skills, which was reflected in the effectiveness of performance and its impact on the skill aspect (7). Therefore, most learning methods are based on choosing an appropriate strategy to achieve the goals that Every teacher tries to reach it, so the (P.A.K.S.A) strategy used to learn volleyball skills in educational units makes female students the focus of the educational process and displays technical skills to open the way for the learner to express his ideas without restriction and have the opportunity for open play in order to produce many Possible new ideas for application.

Conclusions:

- Implementing the (P.A.K.S.A) strategy had a positive impact on learning the skills of serve and set in volleyball for female students.
- The method followed by the subject teacher had a positive impact on learning the skills of serve and set in volleyball among the research sample.
- The experimental group that used the (P.A.K.S.A) strategy outperformed the control group that used the teacher's method used in learning the skills of serve and set in volleyball for female students.

Recommendations:

- Emphasis on implementing the (P.A.K.S.A) strategy in learning some basic volleyball skills, especially the skills of Serve and Set, due to the positive results it achieved.
- Benefit from the results of the study and circulate them in the Ministry of Education to implement the strategy in schools due to its proven results that serve the educational process
- The necessity of following modern strategies in learning volleyball skills
- Conduct similar studies and research on different age groups and for both genders.

Author's declaration:

Conflicts of interest: None

We confirm that all tables and figures in this article are ours and written by the researchers themselves.

Ethical-Clearance: this manuscript approved by local ethical committee of physical education and sport sciences college for women on (February /2024)

Author's contributions:

All contributions of this study were done by the researchers (S.U. and L.S.) who get the main idea and work on writing and concluding also with number of experts, Ahmed Dhiab (College of Administration and Economics) in Statistics, Maurizio Bertollo in revision, Mahmoud Nasser Radhi (Physical Education and Sport Sciences College/ Kufa University) in translating, Haifaa Ahmed in proofreading

Facilitate the task: this study was supported by Physical Education and Sport Sciences for Women / University of Baghdad.

References:

1. Lama Samir. (2016). Psychological energy and its relationship to the level of performance of the serve skill and the ranking of some teams participating in the Central Technical University Women's Volleyball Championship. Modern Sport, 15(3), <https://jcopew.uobaghdad.edu.iq/index.php/sport/article/view/119>
2. Mustafa Hussein Hassan. Cognitive style (divergent-convergent thinking) and its relationship to some complex skills for first-class football club players. Master Thesis. College of Physical Education and Sports Sciences, University of Baghdad, 2021.
3. Nahida Abdel Zaid. (1997). The level of performance of defensive and offensive skills and its relationship to the ranking of teams in volleyball, Master's thesis, University of Baghdad, College of Physical Education.
4. Yarub Khayun. (2002). Motor learning between principle and application: 1st edition, Baghdad, Al-Sakhra Printing Office.

5. Abduljaleel, A. B., & Hamoudi, L. S. (2021). Building and Codifying a Measure of Pursue among Advanced Volleyball Players in Iraq. *Indian Journal of Forensic Medicine & Toxicology*, 15(3), 1300–1308. <https://doi.org/10.37506/ijfmt.v15i3.15490>
6. Basma Naeem, (2010). The effect of education according to the metacognitive strategy for those who take risks versus caution in learning and retaining some basic volleyball skills. Doctoral dissertation p.221
7. Danya Salman. (2022). The effect of using the mental visualization strategy in the style of cooperative groups in learning the two skills of setting from the top and receiving from the bottom in volleyball . *Modern Sport*, 21(2), 0019. <https://doi.org/10.54702/msj.2022.21.2.0019>
8. Ismail Adham, S., & Al-Zuhairi, N. A. (2022). Level of professional pressures during the use of e-learning teaching method among teachers of the Faculties of Physical Education and Sports Sciences in Baghdad. *SPORT TK-EuroAmerican Journal of Sport Sciences*, 11, 52. <https://doi.org/10.6018/sportk.526721>
9. Schmidt, A. Richard, and Timothy Lee. (2005). *Motor Control and Learning*, 4.th, Edition: Human Ken tics.
10. Smith, Patricia, and Raghan (2012): *Instructional Design*, translated by Imam Mujab Muhammad, 1st Edition, Obeikan Publishing Library, Riyadh. -Saleh, Magda Mahmoud: *Contemporary Trends in Mathematics Education*, 1st Edition, Dar Al Fikr Publishers Distributors, Amman.

Appendix (1)

A selected model for an educational unit

Objective: Teaching the skill of serve in volleyball. Group number: 12 female students

Day and date: Sunday 10/2/2022 Teaching unit time: 45 minutes

Unit sections	Time	The details	Notes
Preparatory section	10.m 2.m 4.m 4.m	The introduction General warm-up of the body Physical exercises that serve special muscle groups	Emphasis on attendance, organized standing, and controlling distances between students, then emphasis on performing physical exercises correctly.
Main section	30.m		
Educational aspect	10.m	<ul style="list-style-type: none"> - Explain how to perform the skill - Doing the show - Divide the students into 3 groups of 4 students each - Asking them a question to consult among themselves, find potential solutions, and choose the most appropriate solution 	Strategy (p.a.k.s.a) in which the first letter (p) is applied, which is to find the problem and identify the weakness in the performance of the skill. Then the second letter (a) indicates to analyze the problem and discuss it for the purpose of dividing the required skill so that the players have complete knowledge of performing the skill.
The applied aspect	20m 5m 5m 5m	<ul style="list-style-type: none"> - Performing the serve skill without the ball - - Send to her colleague at a distance of 3m 	As for the third letter (k), knowing the ideas of female players, opening up the space for learners and expressing their ideas without restriction, while the letter (s) indicates choosing ideas that lead to performing the skill appropriately while playing, and the letter (a) applies what has been

	5m	<ul style="list-style-type: none">- Perform serve towards the wall from a distance of 3 m- Perform serve inside the field from a distance of 3 m	reached to the stage of implementation and confirmation. On the technical aspects of performance
Closing aspect	5m	<ul style="list-style-type: none">- Recreational game- Praise the best group and correct incorrect answers- Giving feedback to all learners- Collect the tools and finish the lesson	

تأثير استراتيجية (P.A.K.S.A.) في تعلم مهارتي الارسال والاعداد بالكرة الطائرة للطالبات
سحر عمران ناصر⁽¹⁾, لمى سمير حمودي⁽²⁾, محمد عاصم محمد⁽³⁾
2&1 جامعة بغداد – كلية التربية البدنية و علوم الرياضة للبنات – العراق
3 جامعة الاسكندرية – كلية التربية البدنية و علوم الرياضة – مصر

تضمن مشكلة البحث من خلال ملاحظة الباحثان لأداء الطالبات في الميدان العملي بان هناك ضعف في تعلم بعض المهارات الاساسية بالكرة الطائرة ولا سيما مهارتي الارسال والاعداد، لذا ارتأت الباحثان اعداد وحدات تعليمية باستخدام استراتيجية P.A.K.S.A في تعلم مهارتي قيد الدراسة بالكرة الطائرة للطالبات ويهدف البحث الى اعداد وحدات تعليمية باستخدام استراتيجية P.A.K.S.A في تعلم مهارتي الارسال والاعداد بالكرة الطائرة للطالبات والتعرف على تأثير استراتيجية P.A.K.S.A في تعلم مهارتي قيد الدراسة وبالتالي معرفة افضلية المجموعتين (التجريبية والضابطة) في تعلم مهارتي، وافترض البحث وجود فروق ذات دلالة احصائية بين الاختبارات القبلية والبعدي والمجموعتين الضابطة والتجريبية في تعلم مهارتي الارسال والاعداد بالكرة الطائرة وكذلك وجود فروق ذات دلالة احصائية بين المجموعتين التجريبية والضابطة في الاختبارات البعدي في تعلم مهارتي قيد الدراسة. واستخدمت الباحثان المنهج التجريبي بأسلوب المجموعتين المتكافئتين ذات الاختبار القبلي والبعدي عشوائية الاختيار لملائمة لطبيعة البحث، وتم تحديد مجتمع البحث من طالبات الصف الثاني متوسط في ثانوية الفضائل للمتفوقات للعام الدراسي (2022- 2023) وبلغ عدد العينة (24) طالبة وقسمت الى مجموعتين تجريبية وضابطة وبواقع (12 طالبة) لكل مجموعة وتم تطبيق الوحدات التعليمية باستخدام استراتيجية P.A.K.S.A لتعلم مهارتي قيد الدراسة ولمدة ثمانية أسابيع وبواقع وحدتين تعليمية في الأسبوع الواحد وبلغ زمن الوحدة الواحدة (45) دقيقة. واستخدم الباحثان الحقيبة الاحصائية spss لمعالجة البيانات وتم التوصل إلى عدد من الاستنتاجات كان من اهمها ان لاستراتيجية P.A.K.S.A تأثيرا ايجابيا في تعلم مهارتي الارسال والاعداد بالكرة الطائرة للطالبات وتفوق المجموعة التجريبية على المجموعة الضابطة في تعلم مهارتي قيد الدراسة، وعليه توصي الباحثان بعدد من التوصيات كان من اهمها الاستفادة من نتائج الدراسة الحالية عند تعلم مهارتي قيد الدراسة فضلا عن تعميم نتائج الدراسة الى وزارة التربية لضرورة تطبيق الاستراتيجية في تعلم بعض مهارات الكرة الطائرة ولا سيما مهارتي الارسال والاعداد. وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (التعليم الجيد).

الكلمات المفتاحية | استراتيجية P.A.K.S.A - الارسال- الاعداد - الكرة الطائرة