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The effect of (S.N.I.P.S) strategy on teaching methods on the performance of some technical gymnastics skills for female students

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Abstract---The education process in general is one of the most important educational processes that need proper scientific planning in order to reach its goals. Learning depends on the effectiveness of the teaching methods used in teaching motor skills for various sports and games. It was also noted that the traditional method, which makes the student a recipient and puts all the decisions of the lesson by the teacher, which is the most used method in teaching motor skills for various sports and games, and there is a clear omission of modern teaching methods in teaching physical education that focus on the role of the learner and his effective participation in the educational process. Where the research deals with the study of the use of the strategy (S.N.I.P.S) in the two teaching methods (reciprocal, training) in the performance of some artistic gymnastics skills for female students. The researcher assumes that there are significant differences between the two teaching methods teaching according to the (S.N.I.P.S) strategy in the performance of some artistic gymnastics skills for the female students. The researcher identified the research community as a group of third-year students in the (College of Physical Education and Sport Sciences, University of Al-Qadisiyah), numbering (60) students. As for the research sample, it was chosen by random method, and the totals were distributed on the methods by lottery method. The first group was taught in the method followed by the school, the second group was taught by the reciprocal method, and the third group was taught by the training method, and the strength of each group was (15) female student.

Keywords---(S.N.I.P.S. strategy), reciprocal teaching method, training teaching method, human wheel skill, star jump skill.

Introduction

The technical gymnastics lesson is one of the important lessons in the (College of Physical Education and Sports Sciences) because of its great impact in preparing learners in all respects, whether it is physical or kinetic preparation through their learning many basic skills, which are characterized by their difficult performance that depends on the individual effort of the student in particular, which it requires experimenting with strategies and methods that may have a positive impact in raising the level of motor performance and activating the role of the learners in the lesson by investing in the integration of thinking and knowledge with the performance of learners and to bring out the skill to be learned as best as possible. (S.N.I.P.S) strategy, which is one of the strategies that require the use of more than one sense as well as thinking to extend beyond knowledge, by adopting sequential steps in the brain to process the reception of information presented by educational means (visual) and answer the questions posed in the educational environment, which makes it suitable for achieving thinking and using mental processes, and to implement this strategy we need modern methods that suit the learners because they do not respond to the learning process in one way and one way because of the difference Requirements for each skill and because learning the basic skills of individual games in general and artistic gymnastics in particular so far is done in a traditional method, which makes the student a recipient only.

Therefore, it has become necessary to seriously research and reach the best teaching methods, and one of these methods is the reciprocal method, which aims to develop the learner's independence from the teacher in performing some sport skills and activate the assessment process for the learner by giving him specific criteria that make him discover alone the mistakes made by his colleagues during the performance various skills, and the other method is the training method, where the learner has a share in making decisions related to the lesson, as this method creates a new type of relationship between each of the teacher and the learner, and between the learner and skills, as well as between the learners themselves, as it provides the learner with sufficient time for solitary work and also provides the teacher with sufficient time to give feedback, and the importance of the research lies in trying to raise the level of teaching technical gymnastics skills by knowing the effect of the (S.N.P.I.S) strategy using the two teaching methods (reciprocal, training) in learning some technical gymnastics skills for female students.

The research problem is:

Through the follow-up to the gymnastics lesson and their practice, it was noted that the students' lack of interest in learning and training some technical gymnastics skills, and the lack of use of modern scientific methods, which calls for the importance of using these educational methods and scheduling them in the educational curriculum to serve the educational process, especially with complex skills.

The search aims is:

1. Identifying the impact of the (S.N.I.P.S.) strategy in the reciprocal method on the performance of some artistic gymnastics skills for female students.
2. Identifying the impact of the (S.N.I.P.S.) strategy in the training method on the performance of some artistic gymnastics skills for female students.
3. Comparing the effect of the (S.N.I.P.S.) strategy between the two methods (reciprocal, training) on the performance of some artistic gymnastics skills for female students.

Research procedures:

Research community and sample:

The researcher identified the research community, consisting of students of the third stage in the (College of Physical Education and Sports Sciences, University of Al-Qadisiyah), which numbered (60) students. The first group was taught in the manner used by the school, and the second group was taught by the reciprocal method, and the third group was taught by the training method, and each group consisted of (15) students. (5) female students were selected to represent the pilot experiment sample, and the researcher excluded a number of failed, sick and absent students from attending the tests. As shown in table No. (1).

Table No. (1)
shows the number of research sample members for the three groups

Groups	Research sample in each group	The group	Applicable method
A	15	control group	The method used by the teacher
B	15	The first experimental group	reciprocal method
C	15	The second experimental group	training method
D	5	pilot experimental sample	-

The researcher used the experimental method in an equal group manner, as it fits with the nature of the research problem.

This study dealt with the variables, which are (S.N.I.P.S) strategy, teaching methods, some gymnastics skills. The research skills were deliberately chosen, the skill of the human wheel (ground movements), the skill of star jump (balance beam).

Educational curriculum:

Through the researcher's briefing on many educational curricula in the field of artistic gymnastics and teaching methods.

The educational curriculum was implemented for each of the (experimental) research groups by a specialized teacher and under the direct supervision of the researcher, as the educational curriculum designed according to the (S.N.I.P.) strategy was applied in the two methods (reciprocal, training), which included (16) educational units for each group. (8) educational units for a period of (8) weeks, with one educational unit per week, and the duration of each educational unit is (90) minutes.

Working groups while applying the vocabulary of methods

The research sample was divided into three groups (A, B, C). Each group is taught by one of the three methods (the method followed by the teacher, the reciprocal method, the training method). The number of each group was (15) female students performing their work as follows:

Group method method followed by the teacher:

The teacher explains the skill sequentially, then presents a model, and then allows the students to perform in the practical side while giving feedback.

Reciprocal method group:

The teacher explains the skill to be learned as well as its performance, then she presents the visual aid, which contains pictures and figures about the skill to be learned according to the five steps of implementing the strategy, then the teacher gives feedback during the presentation of the visual aid, and then divide the students into pairs to work together reciprocally. Where the skills were practically applied by reciprocating roles between the students, one of them performs and the other observes. The role of the observer is to provide feedback, the aim of which is to give information to the female performer about her performance according to the standards sheet, and then they reciprocate roles.

Training method group:

The teacher explains the skill to be learned as well as its performance, then displays the visual media, which contains pictures and figures about the skill to be learned according to the five steps to implement the strategy, then the teacher gives feedback during the presentation of the visual aid, and then the students make decisions by choosing the designated place and the appropriate conditions for applying the skills and starting and finishing the application of the skills. As for the role of the teacher, it is to notice the students' mistakes and correct them for them.

Post tests:

Post-tests of technical performance were conducted after the completion of the application of the curriculum on Tuesday 3/5/2022 at ten in the morning in the Gymnastics Hall in the College of Physical Education and Sports Sciences -

University of Al-Qadisiyah. The researcher was keen that the conditions are similar to the pre-tests in terms of place and time, and the teacher of the same subject that applied the pre-tests and in the presence of the researcher, a full lesson was filmed for each of the groups and with the same procedures for the pre-tests, and then the results were processed statistically for the purpose of reaching the achievement of the research objectives.

After filming the performance with a Sony camera, the performance discs were distributed to four evaluators for evaluating the performance, as the evaluation was of 10 degrees after deleting the highest and lowest degrees and adopting the average of the two intermediate degrees. The researcher used the statistical bag (spss).

Presentation and discussion of results

1. Presentation, analysis and discussion of the results of the pre and post tests for the skills of the human wheel and the star jump for the control group:

Table No. (2)

shows the arithmetic means, standard deviations, and the calculated (T) value between the pre and post tests of the control group for motor abilities and the skills of the human wheel and the star jump.

Variables	Measurement	Pre		post		The calculated T value	indication
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
human wheel	Degree	1.166667	0.308607	2.467	0.7432	9.80435	significant
star jump	Degree	1	0.188982	5.366667	1.156761	3.57	significant

- The tabular value ($n - 1$) = 14 is significant at an error level (0.05) that amounted to 1.761.

The results of Table No. (2) show that the arithmetic mean of the pre-test human wheel skill was (1.166) with a standard deviation (0.308), while the post-test reached (2.467) with a standard deviation (0.743), with a value of (T) calculated (9.304), At the degree of freedom (14) and the level of significance (0.05), which is greater than the tabular value of (1.761) and this indicates a significant difference between the pre and post tests in favor of the post test of human wheel skill.

This explains to us that the method followed by the teacher led to learning the skills in a positive method, and the researcher attributes this to the training and the effectiveness of the skill used in the educational methods, as for the arithmetic mean of the pre-test of the star jump skill, it reached (1) with a standard deviation of (0.188), while the post-test, the arithmetic mean reached (5.366) with a standard deviation (1.156), with a value (T) calculated (3.57) at a degree of freedom (14) and a level of significance (0.05), which is greater than the tabular value of (1.761), and this indicates that there is a significant difference

between the pre and post tests in favor of the post-test. The researcher attributes this to the curriculum prepared by the teacher and the teacher's field experience for this subject in how to give those skills.

2. Presentation, analysis and discussion of the results of the pre and post tests for the skills of the human wheel and the star jump for the second group (first experimental).

Table No. (3)

shows the arithmetic means, standard deviations and (T) value calculated between the pre and post tests of the first experimental group for the skills of the human wheel and the star jump.

Variables	Measurement	Pre		post		The calculated T value	indication
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
human wheel	Degree	1.033	0.229	6.63333	0.6114	3.28	significant
star jump	Degree	1.1	0.20702	6.53333	0.7249	2.47	significant

The results of Table (3) show that the arithmetic mean of the pre-test human wheel skill was (1.033) with a standard deviation (0.229), while the post-test reached (6.633) with a standard deviation (0.611), with a calculated (t) value of (3.28) at a degree of Freedom (14) and the level of significance (0.05), which is greater than the tabular value of (1.761), and this indicates a significant difference between the two tests and in favor of the post-test.

The researcher attributes this to the use of the (S.N.I.P.S.) strategy, which is one of the modern meta-knowledge strategies that center around the student, and the strategy contributed to their learning of skills due to the interaction of students with visual means of presentation, and this is the biggest incentive for them to perform diligently and actively and for integration between The theoretical and practical side used the reciprocal method, as it contributed to the development of the skill performance for the work it included in accordance with the standards paper and the formation of pairs between the students, one of them performing and the other monitoring, then the roles are reciprocated.

As for the arithmetic mean of the pre-test for the star jump skill, it reached (1.1) with a standard deviation (0.207), while the arithmetic mean of the post-test reached (6.533) with a standard deviation (0.724), with a value (t) calculated (2.47) at the degree of freedom (14), and the level of significance is (0.05), which is greater than the tabular value of (1.761), and this indicates a significant difference between the two tests and in favor of the post-test. The researcher attributes this to the (S.N.I.P.S.) strategy and the reciprocal method, where the use of difference and diversity in the process of explanation and communicating information, which helped to significantly improve the students' performance in the skill, in addition to giving immediate feedback from the observing colleague.

3. Presentation, analysis and discussion of the results of the pre and post tests of the skills of the human wheel and the star jump for the third group (second experimental)

Table No. (4)
shows the arithmetic means, standard deviations and (T) value calculated between the pre and post tests for the second experimental group for the skills of the human wheel and the star jump.

Variables	Measurement	Pre		post		The calculated T value	indication
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
human wheel	Degree	1.1	0.280	7.066667	0.371612	2.28	significant
star jump	Degree	1.1	0.20702	7.266667	0.416905	7.56	significant

The results of Table (4) show that the arithmetic mean of the pre-test human wheel skill was (1.1) with a standard deviation (0.280), while the post-test reached (7.066) with a standard deviation (0.371), with a calculated (t) value of (2.28) at the degree of freedom (14) and the level of significance (0.05), which is greater than the tabular value of (1.761) and this indicates a significant difference between the two tests and in favor of the post-test. The researcher attributes this to the (S.N.I.P.S.) strategy and training method, which allowed the students the freedom to choose the place and the large number of exercises used in the practical application of the skill and by watching the explanatory videos of this skill and repeating the practical application more than once until the information arrives in a clearer and more accurate way.

The arithmetic mean of the pre-test star jump skill was (1.1) with a standard deviation (0.207), while arithmetic mean of the post-test was (7.266) with a standard deviation (0.416), with the calculated (T) value (7.56) at the degree of freedom (14) and the level of significance (0.05).), which is greater than the tabular value of (1.761), and this indicates a significant difference between the two tests and in favor of the post-test.

The researcher attributes this to the (S.N.I.P.S.) strategy and the training method, which provides enough time for the student to work alone and feel independent in making decisions (decisions to start work, speed timing of performance and rest period between one duty and another) and the feedback is derived directly from the teacher.

4. Presentation of the results of the comparison in the post test between the three research groups of human wheel skill.

Table No. (5)
shows the results of the analysis of variance in the post-test between the three research groups for the skill of the human wheel.

	Sum of squares	degree of freedom	average groups	Calculated f value	Indication level	Indication type
Between groups	34.411	2	17.206	13.532	.000	significant
Within groups	53.400	42	1.271			

- The tabular value (q) at an error rate of (0.05) and two degrees of freedom (42.2) amounted to 3.23.

From the above table, it was found that there is a significant difference between the three groups because the calculated (f) value of (13.532) is greater than the tabular (f) value at the two degrees of freedom (2.42) and the level of significance (0.05), and to find out the direction of the difference in favor of any group, the researcher sought the assistance of the value of the least significant difference (L.S.D) between the three groups.

Table No. (6)
shows the results of the (L.S.D) test and determining the priority of the groups over each other.

Groups		averages	Indication	L.S.D. value
Control	First experimental	-1.60000*	0.000	-2.4309
	Second experimental	-2.03333*	0.000	-2.8642
First experimental	Control	1.60000*	0.000	.7691
	Second experimental	-.43333	0.299	-1.2642
Second experimental	Control	2.03333*	0.000	1.2024
	First experimental	.43333	0.299	-.3976

From table (6) we note:

- There is a significant difference between (the control group, the first experimental group) at the level of significance (0.000) in favor of the first experimental group, and a significant difference between (the control group, the second experimental group) at the level of significance (0.000) in favor of the second experimental group. .

- b. There is a significant difference between (the first experimental group, the control group) at the level of significance (0.000) in favor of the first experimental group, and an insignificant difference between (the first experimental group, the second experimental group) at the level of significance (0.299) in favor of the second experimental.
 - c. There is a significant difference between (the second experimental group, the control group) at the level of significance (0.000) in favor of the second experimental group, and an insignificant difference between (the second experimental group, the first experimental group) at the level of significance (0.299) in favor of the second experimental.
5. Presentation of the results of the comparison in the post-test between the three research groups for the star jump skill.

Table No. (7)
shows the values of the sum of squares and their average between and within groups and degrees of freedom, the calculated (f) values and the level of significance.

	Sum of squares	degree of freedom	average groups	Calculated f value	Indication level	Indication type
Between groups	27.544	2	13.772	20.278	.000	significant
Within groups	28.525	42	.679			

From the above table, it was found that there is a significant difference between the three research groups because the calculated (f) value of (20.278) is greater than the tabular (f) value of (3.23) at the two degrees of freedom (42.2) and the level of significance (0.05) and to know the direction of the difference in favor of any group, the researcher used the value of the least significant difference (L.S.D) between the three groups.

Table No. (8)
shows the results of the (L.S.D) test, and determining the priority of the groups over each other.

Groups		averages	Indication	L.S.D. value
Control	First experimental	-1.16667*	0.000	-1.7740
	Second experimental	-1.90000*	0.000	-2.5073
First experimental	Control	1.16667*	0.000	.5594
	Second experimental	-.73333*	0.19	-1.3406

Second experimental	Control	1.90000*	0.000	1.2927
	First experimental	.73333*	0.19	.1260

From table (8) we note:

- a. There is a significant difference between (the control group, the first experimental group) at the level of significance (0.000) in favor of the first experimental group, and a significant difference between (the control group, the second experimental group) at the level of significance (0.000) in favor of the second experimental group.
- b. There is a significant difference between (the first experimental group, the control group) at the level of significance (0.000) in favor of the first experimental group, and a significant difference between (the first experimental group, the second experimental group) at the level of significance (0.019) in favor of the second experimental group.
- c. There is a significant difference between (the second experimental group, the control group) at the level of significance (0.000) in favor of the second experimental group, and a significant difference between (the second experimental group, the first experimental group) at the level of significance (0.019) in favor of the second experimental group.

Conclusion

Through the results of tables (5) (f) and (6) (L.S.D), which showed that there are significant differences between the three research groups, where the first experimental group showed superiority over the second experimental and control groups in the skill test (human wheel), and the researcher attributes the reason for the superiority of the first experimental group to several factors:

The use of the (S.N.I.P.S) strategy, which is centered around the student, in contrast to the traditional strategies, which provided the students with more free learning without the teacher's intervention except when necessary. The researcher attributes that the learning according to the (S.N.I.P.S) strategy took place in small groups, and this helped to the cooperation between the female learners in order to reciprocate of information, as the strategy contributed to raising questions as a result of watching the visual medium, and then cooperating with each other for guidance, and thus, writing down what was concluded and determining what is in the medium has contributed to creating a kind of cooperation between the students and within their groups and for the integration between the theoretical and practical side in using the reciprocal method, as it contributed to the development of the skillful performance of what was included in the work according to the standards paper and the formation of pairs between the students, one of whom performing and the other observing and then exchanging roles, in addition to repeating the movement continuously until the group was able to reach this level of development.

The use of the (S.N.I.P.S.) strategy in the reciprocal method of learning skills provides an opportunity for the senses through which information is communicated to the central and peripheral nervous systems, and thus the processes of cognition, storage and retrieval are carried out within the educational curriculum developed by the researcher, which is done by reviewing the storage and then the skill performance. During work in accordance with the duty sheet or standard as well as the observation and feedback provided by the female colleague. As for the results of Table (7) (f) and (8) (L.S.D), which showed the presence of significant differences between the three research groups.

The second experimental group showed superiority over the first experimental and control groups in tests of the skill of leaping stars, and the researcher attributes this development to the role of the (S.N.I.P.S.) strategy in creating an atmosphere of enthusiastic interaction and fun among the students by asking questions and writing down what was concluded, which helped to increase the students' activity during the lesson, and directing their thinking towards what is important in the visual medium and increasing the interaction of students by viewing the pictures. The strategy used also helped in providing feedback by repeatedly watching the presented visual medium. In addition to the role of the training method, where the student performs the skill on her own without restrictions, which gives the student the freedom to link what was seen in the visual media and illustrations with performance, as the increase in scientific knowledge and the availability of self-motivation to learn was the main factor for students to reach the correct mechanism to understand how to perform the skill. As well as providing immediate feedback by the teacher during the learning phase, which in turn led to progress and improvement in skills.

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