International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 02, 2020
ISSN: 1475-7192

The effect of a proposed device on learning the skill of handstand on the parallel device for men

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Abstract:

In order for workers to achieve the goals, the steps of the work must be distinguished in succession, that is, the process of development takes a continuous form, the need for the innovation process is achieved in all fields and shows the extent of the discrepancy between the previous work steps if they are compared to the new steps and built according to the foundations identified by the need highlighted by the application process Field.

Keywords:*handstand, parallel device, process Field.*

I. Introduction:

The multiplicity of mathematical practice gave each type a different method in the process of learning basic skills according to their nature. Some types of sports require a tool, including those who need an opponent and some of them need both. As for the tool, either performance is by using it and the player is the one who determines his nature According to performance variables, this tool is often free and not fixed, and the performance is in the form of open skills, such as ball games and throwing games in the arena and the field and others, as well as for the games in which the skillful performance is performed with an opponent, the performance changes with the change of the opponent's position and this affects the form of performance, As for the other type, which also deals with a tool that is fixed, in this type of games the form of skill performance is determined by determining the performance variables, which are often fixed, and in this case the performance requirements are more accurate and more difficult, and examples of this are gymnastics, skipping performance variables is distinguished. With difficulty and requires a careful physical and movement building, the player in order to perform the rotations on the mind apparatus requires him to deal with the Earth's gravity and the momentum that is generated by the nature of the movement and may erode C This refers to a complex process for learning to occur, which requires effort on the part of the trainer and the player, and this is often on all gymnastics equipment. Therefore, workers in the sport of gymnastics seek to invent the best methods that help in learning the skills, which, as we previously mentioned, is characterized by difficulty and one of the methods that these follow is The process of designing assistive devices, which is often designed to overcome the difficulty hindering the player from performing for the first time and through that design he is able to perform, and also the nature of the continuous design practice will contribute to the development and development of physical and motor capabilities as well as a sense of the motor paths, as the importance of research lies in the

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design An assistant device to learn to perform the skill of handstand on a parallel device by preparing exercises on the prepared design

Research problem:

The movements of the parallel device are characterized by difficulty, as well as the difficulty of manual assistance, due to the nature of the students' bodies and their being beginners and also during the learning process, the lack of achievement of the skill was observed by most students because the performance on the device is characterized by danger, so the researchers decided to find a design that could help students to perform and learn the skill of standing on Hands being one of the basic skills on a parallel device for men

Research aims:

1- Designing a proposed device and preparing exercises to learn the skill of standing hands on a parallel device

2- Knowing the effect of the device and exercises in learning the skill of handstand on the parallel device for men

Hypothesis search:

1- There are statistically significant differences for the pre and post tests for the control and experimental groups.

2- There are statistically significant differences for the post- tests of the experimental and control groups.

Research areas:

The human field:

The research population included students of the Faculty of Physical Education and Sports Sciences, third stage, Diyala University

Temporal domain: From

1/3/2020 to 4/26/2020

Spatial domain:

Gymnasium, College of Physical Education and Sports Sciences, University of Diyala

Theoretical studies:

Kinetic learning

- Waving the side horse on the handles

Hardware design

II. Research methodology and field procedures:

Research Methodology:

The method of solving the problem is determined from the nature of the approach. The researcher used the experimental method to achieve the results of the research.

Research community and sample:

The research community included students of the third stage, as the sample was chosen by lottery for one of the third stage divisions, Division (C), and that the sample "is the part that represents the original community or the model on which the researcher conducts all his work and consisted of 40 students after excluding repeaters, patients, and the exploratory experiment group of which are 9 students, and the sample was divided into two control and experimental groups, and they were divided into even and individual numbers, and the experimental group was chosen by lot as well, represented by the marital count

The researcher conducted parity between the members of the research sample in the performance of the handstand skill on the parallel device in order to be able to attribute the change process to the experimental factor of the educational curriculum prepared using the proposed device.

Table (1) shows the equivalence of the two groups in the pre-tests

Num	Skill	measuring unit	Experimental-Pre		Control-Pre		(T) calculated	(T) Tabular	Level of significance
1	Handstand on Parallel device	Degree	A	ع	A	ع	1,7	1,96	Non-Sign
			1,58	0,45	1,60	0,42			

At a level of significance (0.05) and a degree of freedom 19

Tools and devices used in the research:

The researcher used the devices and tools through which the results are reached, as "one of the basic means that a researcher must adopt in order to reach the results required to achieve the goal or objectives of the research."

Methods for gathering information:

Arab and foreign references and sources

Self-observation

Registration forms

To test and measure

Tools and devices used in the research:

- Factory device

Sponge mats

- tape measure

- Welding machine

- Drill

- screws

- Computer

Tests used in research:

The researcher used the skill performance assessment, as the performance of the skills under discussion is evaluated after the judges 'agreement of (10 marks), where the performance is evaluated by four judges excluding the two extremes, and the average of the two scores for the player is calculated as a final score

Machine design:

The device consists of four legs with a height of 170 cm. The stature can be lifted from the device and fixed. The menus at the front are tilted at an angle that can be controlled in size. The back legs are perpendicular to the parallel beams placed on both sides, meaning the distance between each side menu with the rear menu with the same beam with protectors that reach 1 m coated with sponge from the inside to cover the beams and fill the space between them, and also placed between the two rear crossbars perpendicular to the device as well as a protective device so that the shape becomes a rectangle minus the rib of the slot on the student's side to be able to perform and rely on the protectors to prevent the student from falling aside and in front of any work on the wall.

Pilot experiments:

The first exploratory experience:

The researcher conducted an experiment Tuesday 10/3/2020 during the manufacturing process to ensure the accuracy of the manufacturing process on three students

The second exploratory experiment:

The researcher conducted the experiment on Wednesday 11/3/2020 to determine the suitability of the device for the nature of the learning process on three students who were excluded from the experiment

Main experience:

Pre-tests:

The pre-tests were conducted on Sunday 3/15/2020 in the gymnastics hall, as the researcher gave an introductory unit about the nature of performance in the gymnastics hall. The tests were then filmed for the performance of the research sample on the discs of my master for the purpose of presenting it to the arbitrators to evaluate the performance of the research sample.

Field applications:

The main experiment was conducted on the research sample for a period of (4) weeks, which began on Tuesday 3/17/2020 and Thursday of each week, with two lectures per week, where the researcher applied the prepared exercises .and according to the lesson plan, as the number of lectures reached (7) During which exercises are distributed in the main section and ended Thursday 4/9/2020

Post- tests:

The post- tests of the research sample were conducted on Sunday 12/4/2020 9:00 am with the performance of the skill in question, the research sample in the gymnasium of the College of Physical Education and Sports Sciences, as they were photographed for the purpose of presenting them to the arbitrators to evaluate the performance of the members of the research sample.

Statistical methods used in the research:

The researcher used the statistical bag (spss)

III. Presentation and analysis of results:

Presenting the results of the pre and post tests for the two research groups:

The researcher reached the following results by using appropriate statistical methods and laws for data processing and in the light of scientific references that enable researchers to achieve the research hypotheses and objectives, and they were discussed in light of these references.

Table (2) shows the value of the arithmetic mean, standard deviations, (T) calculated and tabular, and the statistical significance of the pre and post testfor the control group

Num	Skill	measuring unit	Experimental-Pre	Control-Pre	(T) calculated	(T) Tabular	Level of significance
1							

	Handstand on Parallel device	Degree	A	ع	A	ع	15,36	2,09	Sign
			1,6	0,45	5,09	1,10			

At a level of significance (0.05) and a degree of freedom 19

Table No. (1) shows the value of the arithmetic mean and the standard deviation of the control group in the pre and post tests, the calculated value of (t) and the table, and the level where the value of the arithmetic mean of the pre-test reached (1.6) with a standard deviation (0.45) and the value of the arithmetic mean of the post test reached (5.09) and the standard deviation (1.10) and the value of (t) calculated (15.36) at a level of significance of 0.05 and a degree of freedom (19), which is greater than the tabular, indicating the presence of significant differences between the pretest and the post test and in favor of Post test

Table (3) shows the value of the arithmetic means, the standard deviations, and (T) the calculated and tabular, and the statistical significance of the pre and post test for the experimental group

Num	Skill	measuring unit	Experimental-Pre		Control-Pre		(T) calculated	(T) Tabular	Level of significance
1	Handstand on Parallel device	Degree	A	ع	A	ع	**16,20**	2,09	Sign
			1,58	**0,42**	**6,13**	**1,02**			

At a level of significance (0.05) and a degree of freedom 19

Table No. (2) shows the values of the arithmetic mean and standard deviations, and (t) calculated and tabular for the pre and post test of a skill, as the value of the arithmetic mean of the pre-test of the experimental group reached (1.58) with a standard deviation (0.42) and the value of the arithmetic mean of the post test reached (6.13) and the standard deviation (1.02) and the calculated value of (t) was (16.20) at a level of significance of 0.05 and a degree of freedom (19), which is greater than the tabular, indicating the presence of significant differences between the pre-test and the post-test and in favor of the Post-test.

Table (4) shows the value of the arithmetic means, the standard deviations, and (T) the calculated and tabular, and the statistical significance of the pre and post test for the experimental group

Nu	Skill	measuring	Experimental-	Control-Pre	(T)	(T)	Level of
m		unit	Pre		calculated	Tabular	significance

1									
	Handstand on Parallel device	Degree	A	STD	A	STD	**3,04**	**2,91**	Sign
			6,13	**1,02**	**5,09**	**1,10**			

At a level of significance (0.05) and a degree of freedom of 38

Table No. (3) shows the values of the arithmetic mean and standard deviations and (t) calculated and tabular for the post-test for the control and experimental groups, as the value of the arithmetic mean of the post test of the experimental group was (6.13) with a standard deviation (1.02) and the mean value of the control group was (5.09 with a standard deviation (1.10) and the calculated value of (t) reached (3.04), which is greater than the tabular (2.91) below the level of significance (0.5) and the degree of freedom (38), which indicates the existence of a significant difference. And for the benefit of the experimental group.

Discuss the results

Through Table No. (2) and the difference in the arithmetic mean of the group and the value of (T) calculated, which is (15,36), which is greater than the tabular (2,09), which indicates that there is an evolution of the nature of skill performance and the researcher attributes this development to that the person in the learning process takes Sequential steps, through which he seeks to achieve his goals and deliver information that has been developed according to his work plan and always and is a sequential process, and differs in the nature of attitudes and special procedures, whose method is to achieve the best results. Information to students, and in parallel to that, the student has his goals, which are achieving success, which is a goal to be achieved through the learning process and a competitive approach.

Through the results in Tables No. (3) and the difference in the arithmetic meanings of the two experimental groups and the value of (T) calculated, which is (16.20), which is greater than the tabular and amounted to (2,09), which indicates that there is a preference for the nature of the skillful performance of the experimental group in relation to the control, which they attribute. The researcher referred to the nature of the exercises that were used in the learning process on the device that was manufactured, as through its use, students in the group were able to learn and acquire the skill of handstand on the parallel device, as it achieved ease of practicing the skill of handstand with the help of the device from the nature of safety during performance and practice. Many educational methods in the field of learning and teaching have an effective effect on improving them, and the matter stops. They are used as a purely educational method and aim to learn different skills in sports, including those used as safety methods that help learners perform difficult and dangerous movements. The nature of gymnastics skills requires providing safety, as most cases of failure In learning and avoiding practice, which is a condition of work, fear of performance, and this is what is emphasized in practicing gymnastics right up to adidas The acquisition of skill according to the stages of learning and the nature of design achieved safety for the learner.

Table No. (4) shows that there are significant differences between the experimental and control groups, and in favor of the experimental group, as the arithmetic mean of the experimental group reached (6.13) and the arithmetic mean of the control group was (5.09) and the value of (t) calculated (3.04) which is The nature of gymnastics skills is greater than the tabular value of (2,91) that the nature of the skills of gymnastics requires the use of devices and that is because most of the skills are characterized by speed during performance and also complex performance and that these and other characteristics make the manual assistance process characterized by difficulty and in most of them not possible, the devices as seen by Muhammad Ibrahim Shehata Achieving some objectives that help in completing the performance process and the practitioner to achieve the learning process, including (providing safety, an element of suspense, acquiring physical characteristics, kinetic fitness and some psychological traits, gradual difficulty, accelerating learning and facilitating the performance of movements in order to perform them on legal devices, directing movement paths, Discover the nature of the devices' work), "The use of the device and the exercises prepared on it achieved better learning for the experimental group through the safety it achieves as well as the process of gradual difficulty

The complex performance of the fact that the movements of gymnastics in most of the fields of their practice require special places for practicing them, so one of the most important things that must be available safe practice is that the practice is the most important condition in the process of learning the skills and this was achieved through the device of the experimental group and thus the research hypotheses were fulfilled.

IV. Conclusions and recommendations:

Conclusions:

1- The positive effect of the device in learning the skill of handstand on the parallel device through the player's focus on the nature of technical performance as a result and ease in the practice process

2- The positive effect of the device in overcoming the fear barrier among the research sample

3- Using the device achieved the optimal investment in learning time due to the ease of practice on it

4- A positive effect of prepared exercises on the device in developing the motor abilities of standing on the hands on the parallel device

Recommendations:

1- Using the device to teach the skill of standing hands on the parallel device in learning the skill under investigation to achieve better motivation for the learner

2- Using the device to teach the handstand movement on a parallel device for students of the College of

Physical Education because it is difficult to control the student with manual assistance

3- Conducting similar studies

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