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The effect of sensory preferences in learning some of the motor skills of artistic gymnast at the college of Physical Education students

Article Info

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Abstract:

Through the notes researchers to the learning process of motor skills in a game gymnast devices they found don't forget to individual differences and that the learning process is moving to the status equal to the students in their abilities mental, whether through the use of the senses in the reception of stimuli or ways of dealing with them in the process of focus and building the motor programs of performance of the motor skills required. The first aim of study was knowing the effect of sensory preferences in learning motor skills (hand stand on the carpet the ground - jumping annexation on the table jump - the balance of the knee on the balance beam) in artistic gymnast , the second aim was knowing the best system (Sense favorite) in the learning of motor skills in artistic gymnastics. The first research hypotheses was there are significant differences between pretest and posttest and the second hypotheses was there were statistically significant differences in posttest between the three research groups in learning some of the motor skills of artistic gymnastics . The research population have been identified by students in the second stage of the Physical Education College / University of Babylon for the academic year (2012-2013) . Either the research sample has represented the research population overall population, has been the main sample consisted of (25) students were divided into three groups. The researchers used a measure of sensory preferences as well as motor skills tests under study. The researchers applied the pretest, then applied the learning programs, and then applied the posttests. The research data, which were analyzed statistically using mean, standard deviation, (t) test of the samples associated, (F) test and (LSD) test. The researchers was reached to many of conclusions, the most important was the effectiveness of the program in the development of the learning of experimental groups (visual and audio) and the audio group was superiority in the standing on the head and jumping skills, as well as the visual group was superiority in the balance skill.

Key words: sensory preferences, motor skills, artistic gymnast.

1. Introduction:

The interest in the educational process and upgrading has become a concern for all educational institutions, so multiple learning curriculums appeared in its aims and objectives and means, as the educational trends turn into the privacy of the learner in order to be most suitable for him. So it became new responsibility of the teacher , The most important of these duties create a learning environment fit with the needs of the learner and inclinations, the choice of the latest methods that achieve the goals in a short time and effort. Even the learning process is sound in ways that it is necessary to take into account individual differences as human different among themselves in their use of the five senses. Some of them are described as visions (they used vision sense more than others) or auditors (they used audio sense more than others) while others kineticers (they used touch sense more than others). The method preferential one cognitive methods that have received attention, it is the dominant preference of the learner when learning or performance.

The problem of research that each student, especially understanding the information and skills , and that differences between the students in the perception processes are an indicator of the need for diversity of learning styles they need, and learn best when their abilities and methods of used their senses compatible with applicable teaching methods in institutions educational. Through the notes researchers to the learning process of motor skills in a game gymnast devices they found, Failure to observe to individual differences and that the learning process is moving to equal to the students in their abilities mental, though, the use of the senses in the reception of stimuli or ways of dealing with them in the process of focus and building the motor programs of performance of the motor skills required.

The first aim of study was knowing the effect of sensory preferences in learning motor skills (hand stand on the carpet the ground - jumping annexation on the table jump - the balance of the knee on the balance beam) in artistic gymnast , the second aim was knowing the best system (Sense favorite) in the learning of motor skills in artistic gymnastics. The first research hypotheses was there are significant differences between pretest and posttest and the second hypotheses was there were statistically significant differences in posttest between the three research groups in learning some of the motor skills of artistic gymnastics.

2-Methodology
2 -1 Sample:

The sample of research consisted of (25) female students represented the students of college of physical education and sport science in Babylon university. The sample divided into three groups according to test learning favorite, the first group was vision favorite (10 students) and the second group was audio favorite (8 students) and the third group was control (7 students). The table (1) shows the equality between groups in results of skill tests.

Table (1):
shows the equality between groups in skill

Tests	F	Sig.	Type of significance
Handstand	0.88	0.43	Insignificant
Jump annexation	1.19	0.32	Insignificant
Balance	2.03	0.15	Insignificant

2-2 Teaching curriculum:

After the pre-test the researchers apply the teaching curriculum proposed of artistic gymnast. Began on 2/3/2013 until 5/6/2013 by two units in week for each of the research groups. The time of teaching units (90 minutes), has been divided into three sections which: preparatory section (25 minutes), main Section (60 minutes) which contain education department (20) minutes and (40) minutes for the Department of Applied.

The main section has been focusing on sensory preferences by taking into account all the preference for a certain sense experimental group. In the educational part has been a focus for the experimental group (audio) on the sense of hearing, through the explanation of performance skills. the time of the educational part was divided to the explanation time (7 min) , show time (3min) and performance time or perception (10 min). As for the experimental group (visual) has been focusing on the vision sense through the presentation of the performance of skill played by the Model or neighborhood model as well as through video, as he was explaining the performance time (3 min), show time (7 min) and performance or perception time was (10 min).

2-3 Measurement of the variables:

The researchers used a preference sensory scale, which was distributed its papers to the students (research sample) on 02/26/2013 within the time studied gymnastics, and then was collecting the papers and classification according to their responses, which consists of three paragraphs (a, b, c) to determine which sensory preferences (visual , auditory and perception).

To measure the skills (handstand on ground - Jump annexation - Knee balance on the balance beam table), the researchers used the following tests:

1- Test of technical performance of handstand on the carpet the ground.

  Main test: measuring the handstand on the carpet the ground.

  Tools: carpets.

  Performance specifications: When you hear the start signal is tested student performance handstand skill.

  Performance requirements: Raise your arms high angle events without raising the shoulder with an outstretched leg pivot forward. Then the body leaning forward and put a leg to build on the land and raise the second leg starts outstretched strongly back and top with the development of arms on the ground, wide chest and must be attached to leg pivot the second leg to reach the state stand up, raise the head up through the chin dimensions for the chest and events tightening in the totals muscle of the abdomen and legs, as well as should be the body's center of gravity above the focal point.

  Score: each student tested three attempts and calculated attempt is better than (10) degrees.

2- Test of technical performance of jump annexation on table jump device.

Main test: measuring the jump annexation on table jump device.

Tools: table jump, glove & carpets.

Performance specifications: When you hear the start signal the student performance the skill.

Performance requirements: from the front get onto the ladder jump, put your hands down the body in the open corner position and push strongly with your knees bent, and after Portage horse an individual articular thighs and knees at the same time moving the arms up and bend your knees slightly down.

Score: each student tested three attempts and calculated attempt is better than (10) degrees.

3- Test technical performance of knee balance on balance beam skill.

Main test: measuring the knee balance on balance beam skill.

Tools used: casual balance and carpets.

Performance specifications: When you hear the start signal the student performance the skill.

Performance requirements: from a seated position balanced raises two legs high and based on the arms behind the hip then move slowly the legs to down, with the transfer based on the hands in front of the body and soon the hip with few slop the hip to front. continue weighted and increase gradually speed with the increase in the hip slop helps the body balance and stay on top of the balance beam with an emphasis on the survival of the arms outstretched with a very small bend in the elbows, and during the weighted rear legs are working to raise the hip from the bar, after reaching to be desired over the bar high, we put the surface of the foot and hold second man , and then begin to bend the knee with shoulder returned successor to be perpendicular to the survival of the man with hands held high.

Score: each student tested three attempts and calculated attempt is better than (10) degrees.

2-4 Statistical Analysis:

Data of study was analyzed through a program of SPSS and using mean, stander deviation paired-samples t test, ANOVA (F) test, LSD test.

3. Results and Discussion:

Table (2)

Shows significant differences between pre-test and post-test of groups

Group	Tests	T test	Sig.	Type of significance
Experimental (1)	Handstand	7.72	0.00	significant
	Jump annexation	9.44	0.00	significant
	Balance	13.49	0.00	significant
Experimental (2)	Handstand	7.62	0.00	significant
	Jump annexation	12.74	0.00	significant
	Balance	8.28	0.00	significant
Control	Handstand	4.71	0.00	significant
	Jump annexation	6.31	0.00	significant
	Balance	17.96	0.00	significant

By analyzing, the table (2) note the significant differences between pre-test and post-test of experimental groups and control in all the skills because that significant values are less than (0.05).

The researchers attribute that to the educational curriculum influence, which applied on various groups. Where sections of curriculum ensure all the requirements that the students had to learn. Where preparatory Section included special exercises as part of your warm-up, which prepares the muscles that intervention in the performance of motor skills under study. as well as a case of getting the previous motor programs and put them in the short-term memory in order to be close for use in performance. as well as contain the President Section on adequate explanation and presentation as part of the tutorial section which leads to the formation of mental images in order to be corrective reference model so that the student can take advantage of the various feedback types for the purpose of correction to lead to learn motor skills.

Table (3)
Shows significant differences between the experimental groups and control in post-test

Tests	Contrast source	Degree of freedom	(F)	Sig.	Type of significance
Handstand	Between group In group	2 20	0.10	0.00	significance
Jump annexation	Between group In group	2 20	0.42	0.05	significance
Balance	Between group In group	2 20	0.18	0.03	significance

By analyzing, the table (3) note the significant differences between experimental groups and control in post-test in all the skills because those significant values are less than (0.05).

Table (4)
Shows significant differences to (LSD) test between groups

Tests	groups	means	Mean differences	Sig.	Preference Group
Handstand	exp.1-exp.2 exp.1-cont. exp.2-cont.	6.30-6.62 6.30-6.40 6.62-6.40	-0.32 -0.10 0.22	significance significance significance	exp.2
Jump annexation	exp.1-exp.2 exp.1-cont. exp.2-cont.	6.25-6.56 6.25-6.00 6.56-6.00	-0.31 0.25 0.56	significance significance significance	exp.2
Balance	exp.1-exp.2 exp.1-cont. exp.2-cont.	7.50-6.50 7.50-6.40 6.50-6.40	1 1.10 0.10	significance significance significance	Exp.1

Through the analysis of table (4) show that the experimental 2 (auditory preference) which influence in stand on the head and jumping annexation skills but the first group (visual preference) influence in balance skill.

The researchers attribute this result to the type curriculum of second experimental. which relies on the sense of hearing more from another senses as a method of cognitive provides the information to mental processes needs to learn, which was allocated the bulk of the tutorial section to the explanation and clarification of this group were the educational curriculum in type design unified at the Applied and learning part for each group were given more time to explain and clarify minutes skills more than supply and sensory perception (touch) so that it is appropriate and the privacy of the group and this applies to the optical group also were given a presentation time caper for explanation and sensory perception.

Through attention to the information which given to the learners through the prefer sense that lead to effective information processing in terms of quantity and quality, leading to build up a picture of mind as a result of audio information in order to be a model of performance imprinted in the brain of the learner this by On the other hand, the focus on the sense Favorites the learner will facilitate the process of cognition in terms of speed and accuracy of perceptions because it is located tendencies and desires of learners. "The explanation of the technical and formal aspects of motor skill and the direction of track and motor divisions and the relationship of mechanical laws and their impact in helping to speed up and bring to the perceptions of motor skill and the mind of the learner" (1-30).

As well as during the analyses of last tables shows that visual preference group it's a significant difference in the balance only. The researchers attribute this to the good presentation of teacher for this group as well as used video clips by normal and slow speed to clarify the skill and knowledge of the correct motor tracks in order to be a typical image printed in the brain to be corrective reference for learners. "Using visual aids is the learner to acquire new visual perception and motor skill properly through to compare between what should be and what was actually longer and make and model of the most important means used provided that display is right from model" (2-74).

Conclusion: according to the results of the study and discussion, the researchers conclude following; effectiveness of teaching curriculum in the development of level of the experimental group (visual and audio). Audio group was superiority in
Stand on head and jumping annexation as well as the visual group was superiority balance skill, as well as the active influence of the means of display used and adequate explanation of skills.

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Appendix (1)
shows teaching unit model.

Teaching aim: learning the handstand skill   second stag

Time:90 minutes

Educational aim: developing the Determination spirit   Number students: 25

Parts unit	time	Contain unit	Formations	notes
preparatory Section	25 min			
General Warm-up	10 min	General warm-up and creation body and its parts	X X X X X X X X X X Δ	Commitment by system
Special warm-up	15 min	A variety exercises for all body serving the main section	X X X X X X X Δ X	Emphasis on proper body position while performing the exercises
Main section	60 min			
Learning part	20 min	Explain and display skill by Group	X X X X X Δ X	Emphasis on proper body position while performing exercises
Application part	40 min	Special exercises for skill	X X X X X X X X X Δ	correctly application of skill
final section	5 min	Small game relative with artistic gymnastics skills	XXXXXXX Δ	Emphasis on calm