Effect of an Educational Program on the Level of Performing Some Methodological Skills among Handball Students of the First Primary Stage According To Aspects and Dimensions of Movement

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Abstract: The stage from nine to twelve years old is considered the most important and best period to learn the basic physical movement skills. The program of physical education is based mainly on the concepts of movement that are taught through three forms of movement including plays. While supervising some primary schools, the researcher noticed a decrease in the students' level of performing the skills requested in their curriculum. He also observed that teachers of physical education choose some warm-up exercises or educational and applied exercises in the main part of teaching their course without relating these exercises to movement classifications inside the single lesson in order to benefit from the experience of the presented movements. The study aims to conduct an educational program for Handball students of the 4th grade (primary) according to aspects and dimensions of movement to recognize the effect of this program on the level of performing the skills of their Handball course. The researcher adopted the experimental curriculum. The sample is 40 students of two groups, experimental and control group. The program extended for ten weeks. The study resulted in the effectiveness of the educational program in learning some methodological skills in playing handball according to concepts of knowledge of the body-effort-relations; aspects and dimensions of movement. The researcher recommend the necessity of encouraging teachers to use educational programs based on the aspects of movement inside the study plan for the 4th grade students (primary) instead of the traditional trainings (exercises) in all the plays.

Key words: Aspects · Dimensions · Handball · Movement

INTRODUCTION

The stage from nine to twelve years old is considered the most important and the best period of learning movement skills due to its importance in learning the basic physical movement skills. Children in this stage are characterized by the ability-direction-fast learning and fast acquisition of the skills [1].

The program of physical education is based mainly on concepts of movement taught through three forms of movement, dance-plays and gymnastics [2].

The aspects of movement are important because they represent the basic aspects in the process of learning movement skills since they help to reduce complexity of the competition and the need for continuous learning-to-direct the educational activity-facilitate learning and communication-increase child's knowledge and to solve problems [3].

While supervising some primary schools and watching the methods adopted by teachers and students of practical education in teaching the course of Handball skills in the first semester for students of grade four (primary), the researcher noticed a decrease in the students' level of performing their course of skills. He found the teachers concentrated on choosing a group of warm-up exercises or educational and applied ones in the main part of teaching their course. They do not relate these exercises to movement classifications inside the single lesson in order to benefit from the presented movements starting from warm-up and till the final exercises, particularly if they consider the moving of the learning effect. This urged the researcher to conduct the present study.

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Objectives of Study:

- Designing an educational program for Handball students of the 4th grade according to aspects and dimensions of movement.
- The effect of that program on the level of performing the course of skills (catching by hands from the top-whip passing-ball dribbling-various defense movements) for Handball students of the 4th grade.

The Study Hypotheses:

- The existence of statistical differences between mean degrees of pre and post measurements for the experimental group in favor of the post one in the sample course of methodological skills.
- The existence of statistical differences between mean degrees of pre and post measurements for the control group in favor of the post one in the sample course of methodological skills.
- There are statically differences between mean degrees of the tow post measurements for the experimental and the control group in favor of the experimental one in the level of performing the course of methodological skills.

MATERIALS AND METHODS

Course of the Study: The researcher adopted the experimental course with two groups: experimental and control group.

Sample of the Study: The researcher used the intentional random method and selected 40 students from the first primary stage at Omar Ibn Abdel Aziz School-Assiut governorate.

Statistical Description of the Sample: The researcher conducted this description in terms of sample consistency with the variables of age-time-tall-weight and with course of skills under study. The value of the sample's bending coefficient varied between 0.17 and 1.33 indicating the moderate distribution of the sample in terms of the variables under study. The value of "t" between the experimental and the control groups varied between 0.05 and 0.85, the value is less than "t" in the table which indicates the equivalence of the two groups (experimental-control) in all the variables.

Devices of Data Collection:

- Content Analysis: The researcher made an analysis to the content of the teacher’s guide of the primary stage of education to collect the course of Handball skills being taught to students of grade four from the ministry of education. He also made an analysis to the scientific references and previous studies concerning movement education-curricula and handball such as [4-12] to count tests of the skills under study and to set the educational program.

- Forms of Expert Survey: According to the previous analysis, the researcher set the resulted tests of measuring the methodological skills under study in a form of questionnaire to survey experts’ opinion to determine the suitable skillful tests for the students of grade four. The researcher used the tests for the accepted with 70% and more by the experts such as the test of 30 sec. ball passing and receiving on the wall [13]-dribbling for 22 meters in a straight line and the test of various defense movements [14]. The researcher used the form designed by [15] to measure the skill of hand catching from the top because he did not find references concerning this test (Attachment 1).

- Coefficients of the Selected Tests: The Coefficients of the variables under study have been calculated by applying the tests on two groups (normal-distinguished) with each of 15 students. The distinguished group included students in the third elementary year from Al-Qanater old Elementary school-Assiut. The normal group included students from grade four (primary) outside the study sample but from the same community. They have been used to calculate the stability via applying and re-applying the test. The value of calculated "t" varied between 3.73 and 14.94 for skills under study and the value of calculated "r" varied between 0.79 and 0.91 which is higher than the table value of "t" and "R" which indicates the credibility and stability of these tests.

- Adopted Tools and Systems: Rest meter.-Stopwatch.-Medical scale.-Handballs.-medical balls.

- Planning for the Study: The researcher made two pilot studies, the first aimed to recognize the stability and truth of the selected tests and it resulted in...
Table 1: Time division of movement experiences inside an educational program

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Components</th>
<th>1/2</th>
<th>3/4/5</th>
<th>6/7</th>
<th>8/9</th>
<th>10</th>
<th>total</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
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<tr>
<td></td>
<td>Warm-up</td>
<td>20</td>
<td>30</td>
<td>20</td>
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<td>Physical preparation</td>
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<td>2</td>
<td>Main part</td>
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<tr>
<td></td>
<td>ball sense and catching</td>
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<td>80</td>
<td>400</td>
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<td>percentage</td>
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<td>8.88</td>
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<td>whip Passing</td>
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<td>percentage</td>
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<td>3.331</td>
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<td></td>
<td>Defense movements</td>
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<td>Combined skilful trainings</td>
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<td>percentage</td>
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<td>4.44</td>
<td>4.44</td>
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<tr>
<td>3</td>
<td>The end</td>
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<td></td>
<td>Minutes</td>
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<td>100</td>
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<td></td>
<td>percentage</td>
<td>11.11</td>
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<td>11.11</td>
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<td>11.11</td>
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<tr>
<td>Total</td>
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<td>270</td>
<td>180</td>
<td>180</td>
<td>90</td>
<td>900 min</td>
</tr>
<tr>
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<td>4</td>
<td>4</td>
<td>2</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 indicates time division of movement experiences represented in the form of educational units varied between attack and defense skills and combined skilful training. The program takes ten weeks-The educational unit takes 45 minutes and the total time of the program (900) minutes.

Setting the Program:
- **Aim of the Program:** The suggested program aims at teaching the methodological skills of Handball (higher ball catching-ball dribbling-whip passing-various defense movements) students of grade four according to aspects and dimensions of movement.
- **Principles of Setting the Program:** The researcher followed the scientific principles that must be considered while setting such program in a way suitable with the age of the students under study.
- **Contents of the Program:** The researcher revised previous studies and references concerning handball and movement training such as [4, 8, 13, 16-19] in order to extract a group of specialized exercises and trainings that help to achieve the program's goal. The researcher set a group of exercises and arranged the content of the program till reaching the final form of the program's units (Attachment 2).
- **Time Division of the Program:** The researcher mode time division of the program as indicated in Table 1.

Applying the Program:
- **Pre-measurements:** pre-measurements of the chosen variables have been made on Saturday 17/10/2009-19/10/2009.
- **Program Implementation:** The program started to be applied on Tuesday 20/10/2009-2/1/ 2010.
- **Post Measurements:** The post measurements have been made to the entire sample after applying the program on 8/1/2010-9/1/2010.

Attachment 1: Skill tests

The first test:

**Name of the Test:** dribbling 22 meters in a straight line:

The purpose of the test: measuring the speed of dribbling-Compatibility.

**Tools:** Handball.

**Planning and Distribution of Tools:** as shown in the pattern.

**Couch Assistant:** Couch assistant holding the ball.
**Performance Method:** The player stands on 6 meters line as it was shown in the pattern. Once the player gets the permission, he should run to get the ball then dribbling it till he reaches the finishing line.

**Rules:** The trial will be repeated when there is any legal error.

**Registration:** Time is calculated to the nearest 1/10 seconds.

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**Second Test:**

**Name of the Test:** Passing and receiving 30 seconds.

**Purpose of the Test:** measuring the speed of ball passing.

**Test Tools:** Legal Handball-Wall-Stopwatch.

**Test Description:** Examinee stands behind the beginning line (3 Meters aware from the wall) when he gets the permission of beginning he should hold the ball before him and avoid any causes that may reduce numbers of Passing and receiving of ball.

**Test Instructions:**
- Passing and receiving of ball will not be counted if the examinee doesn't stand behind the beginning line.
- Every examinee must have a record holder and a timekeeper, as the record holder will count correct trials of passing and receiving and timekeeper will calculate time.
- Examinee uses his proper hand in this test.

Record the results of the test: numbers of correct trials of passing receiving will be recorded during 30 seconds.
The Third Test:
Name of the Test: Various defensive movement test.

Purpose of the Test: measuring the speed of side defensive movement and forward and backward declination.

Test Tools: handball playground, adhesive tape, measuring tape and stopwatch.

Performance Specifications: Three signs will be drawn on ground using adhesive tape, tow signs (A,B) near the 6 meters Line and distance between them will be three meters and another sign on 9 meters line, as the three signs will from triangle with equal sides. Every side will be 3 meters.

The examinee stands on the place of A, when gets the permission he moves to the sign B then move forward with inclination to the sign C and finally he returns to the sign A by moving backward with declination. The performance will be repeated during 30 Seconds.

Performance Requirements:
- Declination movement of the player is quite similar to the movement of defense as pre of movements of the two legs during side, forward and backward with declination and arms and hands movement.
- The player must reach the down marks (a, b, c) and touched it by feet, moving as it is shown in the figure.
- Examinee must repeat the performance till the end of test time.
- Any contradictory performance to the previous conditions will not be counted during the definite time of test.

Registration of Marks:
- Every correct trial will be evaluated with 3 marks: one mark upon the arrival of the player to the sign(B), Second mark upon the arrival of the player to the sign (C) and the final mark will be registered when the player returns to the sign(A).
- Number of correct trial will be registered during 30 seconds.
- One mark will be deducted for each wrong performance committed by the examinee while trying to reach the drawn sign in case the examinee violates the test conditions.
- If the time of test is finished without reaching the (A) sign, the marks of signs will be calculated then it will be added to the marks of correct trials.

The Fourth Test: Determine the level of the skill of high ball catching by hands

Purpose of the Test: determine the performance level.

Test Tools: handball.

Performance Specifications: The player performs the skill of catching high balls by hands into consideration the following points:
- Extending arms toward the ball with the slackness of elbow joints.
- Separating fingers in order to make thumbs pointed to each other.
- His Right forefinger will point to the left forefinger.
- The form of hands will be as Cone.
When hands touch ball, arms will be pulled and body will be move backward to absorb the strength of pass and get control of it.

**Conditions:** Performance technical points should be put into consideration.

**Recording:** Every technical point correctly performed will be evaluated with a mark.

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### Attachment 2: Models of educational program units

**Week: first**

**Time: 45 min**

**Educational unit:** 1 Target motor: the development of some aspects and dimensions of movement

**Date:** 20 / 10 / 2009 The skill goal: a sense of the ball

<table>
<thead>
<tr>
<th>Unit Parts</th>
<th>Educational activities</th>
<th>Tools</th>
<th>Aspects and dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Step by step: tow lines of the beginning and end are identified. Students stand on the beginning line each student has tow hoops. One at his hand and the other on the ground. After getting the sign of beginning each student must throw the hoop forward to jump in it and pull the one on the ground. Performance will be repeated until the student reaches the end line and the winner is the one who reaches first.</td>
<td>Hoops</td>
<td>Awareness of the body (transition activities)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Voltage(controllers/movements)</td>
</tr>
<tr>
<td></td>
<td>Physical preparation</td>
<td>Warm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Forward Running to centre line with the exchange of touching the ankles to the buttocks and return.</td>
<td>Without</td>
<td>Vacuum (space)</td>
</tr>
<tr>
<td></td>
<td>-Standing and forming circles with the help of arms forward and backward.</td>
<td>Without</td>
<td>Awareness of the body (actions)</td>
</tr>
<tr>
<td></td>
<td>-Zigzag running among cons and returning.</td>
<td>Cones</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Standing with distance and between the legs and tow arms are high-holding medical ball and bending the trunk forward and down.</td>
<td>Medical ball</td>
<td>Voltage (specific flow)</td>
</tr>
<tr>
<td></td>
<td>-Standing facing each other-bending hands on the shoulders of the colleague down.</td>
<td>Without</td>
<td>Vacuum (extensions)</td>
</tr>
<tr>
<td></td>
<td>The main</td>
<td>20min</td>
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<td></td>
<td>Sense of the</td>
<td>20min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ball</td>
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<tr>
<td></td>
<td>-Standing-holding ball with right hand, forward walking to the centre line with the rotation of right arm forward then return and rotation of left arm forward.</td>
<td>Handball</td>
<td>Awareness of the body (transition activities)</td>
</tr>
<tr>
<td></td>
<td>-The same prevision training either the rotation of arms backward.</td>
<td>Handball</td>
<td>Awareness of the body (actions)</td>
</tr>
<tr>
<td></td>
<td>-(Standing and maintenance of ball in hands in front of the body) running and in the front middle line with the delivery and receipt of the ball between the hands in front of and behind the body.</td>
<td>Handball</td>
<td>Vacuum (trends)</td>
</tr>
<tr>
<td></td>
<td>-(Standing and keeping the ball hands in front of the head) running and in the front middle line with the delivery and receipt of the ball between the hands in front of and behind the head.</td>
<td>Handball</td>
<td>Awareness of the body (actions)-Vacuum (tracks)</td>
</tr>
<tr>
<td></td>
<td>-(Standing-holding ball by hands before the body) forward running to the centre line with receiving and passing of ball from the right hand to the left hand and vice versa between legs in the form number.(8)</td>
<td>Handball</td>
<td>Awareness of the body (actions)-Vacuum (tracks)</td>
</tr>
<tr>
<td></td>
<td>The final</td>
<td>5min</td>
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<td></td>
<td>Sense of the</td>
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<td></td>
<td>ball</td>
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<tr>
<td></td>
<td>-Go to your place: each student will be identified with a place a way 5 M from him, then the student must close his eyes. After getting the sign of beginning each student must go to the identified place provided that he stand or just sit down in that place. After finishing, the teacher asks students to check their abilities to reach the identified place.</td>
<td>Chalk</td>
<td>Voltage (specific flow)</td>
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</tbody>
</table>

**Week: second**

**Time: 45 min**
Educational unit: 3 Target motor: the development of some aspects and dimensions of movement
Date: 27/10/2009 The skill goal: skill of catching using hands from above

<table>
<thead>
<tr>
<th>Unit</th>
<th>Parts</th>
<th>Educational activities</th>
<th>Tools</th>
<th>Aspects and dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>20 min</td>
<td>Warm up 5min</td>
<td>Touching flags: Every three students stand together as a team on the beginning line and facing Flags in the playground. When the teacher gives the permission, every team runs forward to take a flag and return to the beginning line. Number of flags owned by the group will be recorded.</td>
<td>Pieces of paper 30 *30cm</td>
</tr>
</tbody>
</table>

Physical preparation
- (And standing-side bending) move the elbows forward and backward.
- Retrogression Running, going and returning by your back through the length of the playground.
- Standing in front of each other trying to touch the knee of the colleague and avoid hi touch.
- Standing, jumping with backward rotation in air behind.
- Standing, jumping on insteps with the lifting of arms aside.

The main part 20min
- Give an idea of the skill of keeping the ball from the top by hands and its performance model.
- (Knees Bending-catch the ball with Hands) throw the ball to a high space then standing to catch the ball above the head by hands.
- Standing-holding ball by hands then throwing the ball one-hand and knees ad bending then catching the ball by hands above the level of head.
- Forward walking and throwing the ball by right hand then catching the ball by the tow hands above head.
- Forward running to center of playground and throwing the ball by right hand then catching it by hands above the level of head.
- Forward running along the playground and throwing the ball in the direction of running then catching the ball above the head level during its down direction.
- Zigzag running along and throwing the ball in the direction of running then catching the ball during its high level.

The final part 5min
Without mobility: The teacher clapping hands and all rotate around each other without touching each other and when the teacher stop clapping, students must stop moving and the one who moves loses the game. The winner is the one who remains to the end.

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Educational unit: 5 Target motor: the development of some aspects and dimensions of movement
Date: 3/11/2009 The skill goal: skill of whippy pass from focal

<table>
<thead>
<tr>
<th>Parts</th>
<th>Unit</th>
<th>Educational activities</th>
<th>Tools</th>
<th>Aspects and dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>20 min</td>
<td>Warm 5min</td>
<td>Touch colleague: Students run in the centre of the playground, except for tow players, hold each other and carry a handball, they run after the other students in the centre trying to touch them with the ball. The one who is touched by them with the ball is to join the ball holder until the end of the game.</td>
<td>ball</td>
</tr>
</tbody>
</table>

Physical preparation 15min
- (Standing) lining around the pitch outer lines..
- Standing holding a ball and turning trunk to both sides.
- Running forward, throwing the ball easily forward and catching it again after one drop on the ground.
- Running forward, throwing the ball forward and catching it while falling down in the air.
- The same exercise as the previous, but throwing the ball and changing running to the right and to the left.
- Running forward, throwing the ball forward and catching it again after one drop on the ground and then doing prostration.

The main part 20min
- Performance model of the skill of whippy passing from stability.
- Instructing how to hold the ball and the direction of the wrist and turning with the ball movement.
- From a sitting position in front of a training wall, holding a handball, performing passing and catching skills.
- The same previous exercise with a focus on making the forearm an angle of 90 degree with the arm then a whippy movement of the arm passing the ball.
- The same previous exercise but from a half lying with the focusing on, but with two opposite lines, each students pass the ball to a team mate facing him

The final part 5min
The movement of the worm: line up each team sitting on the ground consecutively the game starts the first handles the ball to his back and where he lies down and then partakes of so it is the second and the third.

Week: third Time: 45 min

Educational unit: 9 Target motor: the development of some aspects and dimensions of movement
### World J. Sport Sci., 3 (S): 723-734, 2010

**Date:** 17/11/2009  
**The skill goal:** Skills of whippy pass from motor

<table>
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<th>Tools</th>
<th>Aspects and dimensions</th>
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</thead>
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<tr>
<td><strong>Introduction</strong> 20 min</td>
<td>Flowers and wind: two lines will be drawn way from each other with 5 meters in the centre of the playground. Students are divided into two equal teams one called, flowers and the other called wind-team faced each other when the students heard the word flowers team of flowers returns backward and run forward and team of winds trays to catch the members of flowers teams the returning again to the line.</td>
<td>Without</td>
<td>Voltage (controlled movements)</td>
</tr>
</tbody>
</table>
| **Physical preparation** | -(Standing-holding ball) throwing the ball backward then return around and running for catching it.  
-Standing-running on the playground lines.  
-Standing-high jumping and stretching knees.  
-(Standing on a drawn straight line of 10 M) and running on line. | balls | Awareness of the body (actions of body)  
Without | Effort (weight)  
Without | Vacuum (trends)  
Without | Voltage (controlled movements)  
Without | Vacuum (Zigzag path) |
| **The main part 20min** | -Passing and receiving during moving between players away from each other 5 M.  
-Transferring and receiving between two colleagues during running to the centre of playground.  
-Transferring and receiving between two colleagues during running along the playground  
-Three students Stand on the form of triangle the ball with players who passes it. The one standing on his right side who with his turn passes it to the one standing on his right side and so on.  
-The same previous exercise provided that they exchange places with each other.  
-Students are divided into groups. Each group stand forming the shape of circle, in each circle there is a student with a ball. After getting the permission of the teacher, the student passes the ball to his colleague of his right side, then running fast around the centre and returns to his place again, the Same performance will be done by the rest of colleague. | Handball | Vacuum (extensions)  
Handball | Awareness of the body (transition activities)  
Handball | Vacuum (trends)  
Handball | Relationships (pupils)  
Handball | Vacuum (Zigzag path) |
| **The final part 5min** | Ten passes: students are divided into two teams. Each team stand in a circle, each circle consists of 10 students. After getting the teacher's permission, students in each circle try to pass the ball among them in a whip way in no time to pass ten passes the team who passes the ten passes first will be the winner. | Handball | Voltage (time) |

**Week:** six  
**Time:** 45 min

---

**Date:** 24/11/2009  
**The skill goal:** Skill of dribbling

<table>
<thead>
<tr>
<th>Parts Unit</th>
<th>Educational activities</th>
<th>Tools</th>
<th>Aspects and dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong> 20 min</td>
<td>Throw rolled balls: Students will be divided into two teams facing each other as each team stand on special line and each one of them has a ball. The teacher stands between the two lines and rolled a medical ball on ground between the two teams. Students must shoot ball against the rolled balls. The team managed to target the ball will the winner.</td>
<td>Awareness of the body (actions of parts of body)</td>
<td></td>
</tr>
</tbody>
</table>
| **Physical preparation** | -Forward running to the centre line with exchange of lifting the knees high and down.  
-Standing, turning neck and head to right and left, high and down.  
-Standing, connecting hands above head extending arms high for some time.  
-(Standing with a distance between legs-extending arms forward) exchange of trunk turning aside to pass the ball to the colleague. | Without | Awareness of the body (transition activities)  
Without | Vacuum (paths)  
Handball | Awareness of the body (actions of body)  
Handball | Relations (individuals) |
| **The main part 20min** | -Performance of model dribbling skill.  
-Long Sitting-dribbling ball by one hand out side body from the right side of right student and contractor for the left player.  
-The same previous exercise with dribbling ball toward left side by left hand out side body.  
-The same previous with dribbling ball toward right side for one time and left side for another side with the exchange of hands.  
-During kneeling, ball will be dribbled toward right side outside body.  
-The same previous exercise with the dribbling of dribbling the ball to the right side and to the left side with the exchange of the hands outside the body.  
-The same previous exercise with the dribbling of ball toward left by l left hand outside body.  
-During squattting the same previous exercise will be performed. | Handball | Awareness of the body (actions of parts of body)  
Handball | Voltage (controlled movements)  
Handball | Relations (parts of body)  
Handball | Awareness of the body (actions of parts of body)  
Handball | Relations (parts of body)  
Handball | Relations (parts of body) |
| **The final part 5min** | Sun and moon: the stands freely spread and the playground. After the teacher had side the word (moon) students bended their knees, then he called (sun) students must extend their knees, the winner will be the one who lasts to the end. | Handball | Awareness of the body (actions of body) |

**Week:** nine  
**Time:** 45 min
Educational unit: 17 Target motor: the development of some aspects and dimensions of movement
Date: 22 / 12 / 2009 The skill goal: Skill of defensive moves forward and backward

<table>
<thead>
<tr>
<th>Parts</th>
<th>Unit</th>
<th>Educational activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>20 min</td>
<td>Warm 5 min</td>
</tr>
<tr>
<td>Head of the worm:</td>
<td></td>
<td>Each team stands on the form of connected train then the whole team runs together and their guide must collect foods (balls) and put them in the box. The winner is the team who collects more balls.</td>
</tr>
<tr>
<td>Physical preparation</td>
<td></td>
<td>-Running for 30 m in the form of races.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-(standing with a distance between legs-arms are aside-declination) exchanging the wrapping of trunk aside and exchanging touching feet with hands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-(standing with a distance between legs-back to back-both arms high-holding ball) bending the trunk and receiving ball over the level of head.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-right side running for 10 M then 10 M running for left side the right side for 10 M and the exercise will be repeating.</td>
</tr>
<tr>
<td>The main defensive moves forward</td>
<td>20 min</td>
<td>Two students (face to back)-forward moving and pushing the back of the player forward using medical ball.</td>
</tr>
<tr>
<td>The main defensive moves backward</td>
<td>20 min</td>
<td>-The same previous exercise with moving forward.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-standing (facing each other) forward move with both arms high and aside.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Students move forward defensive movements on the form of square.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Students move backward defensive movements on the form of square.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-drawing handball playground, group of students sitting near 6 M line and they make forward defensive movements to reach 9 M then return again to 6 M.</td>
</tr>
<tr>
<td>The final part</td>
<td>5 min</td>
<td>-Long sitting-throwing the ball above the head level and catching it.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-(standing with a distance between legs-holding ball with hands) exchanging the receiving and passing of ball between legs during forward walking.</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

Results of Table 2 indicate significant statically differences at the level 0.05 between mean degrees of pre and post measurements of the experimental group in favor of the post one in the level of performing the methodological skills under study. The calculated value of "t" varied between 2.99 and-8.77 and the rate of improvement varied between 14.71% and 57.89% between pre and post mean of measurement.

The researcher relates this improvement to the positive effect of the suggested program applied to the experimental group. This includes setting exercises in the introduction and teaching the course of handball skills according to the aspects and dimensions of movements. The previous notion for designing experiences of educational movement games via movement classification helps the students to reach the utmost degree of being skilled players despite their different abilities. This mean facing the needs of talented students-slow learning ones and slow growing students [20].

The development of movement skills is directly connected with the development of movement abilities which is related to child's maturity to be ready to accept physical skills. The child in this stage would be dynamic with continues movement and tends to participate in the physical activities [8].

Consequently, the first hypothesis is achieved "the existence of statistical differences between mean degrees of pre and post measurements for the experimental group in favor of the post one in the sample course of methodological skills.

Results of Table 3 indicate significant statically differences at the level 0.05 between mean degrees of pre and post measurement of the control group in favor of the post one in the level of performing the methodological skills (whip passing-ball dribbling-various defense movements). The calculated value of "t" varied between 2.92 and 4.61 and the rate of improvement varied between 4.12% and 21.21% between pre and post mean of measurement.

Table 2: Arithmetic mean-standard deviation and rate of improvement and value of "t" between pre and post mean of measurement for the experimental group (N=20)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pre</th>
<th>Post</th>
<th>Rate of improve-ment</th>
<th>Value of &quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arithmetic mean</td>
<td>standard deviation</td>
<td>Arithmetic mean</td>
<td>standard deviation</td>
</tr>
<tr>
<td>Catching by hands from the top</td>
<td>degree</td>
<td>1.80</td>
<td>0.52</td>
<td>2.80</td>
</tr>
<tr>
<td>whip Passing and receiving on the wall</td>
<td>number</td>
<td>8.55</td>
<td>1.64</td>
<td>13.50</td>
</tr>
<tr>
<td>Ball dribbling for 30 m in straight line</td>
<td>second</td>
<td>7.02</td>
<td>1.02</td>
<td>6.12</td>
</tr>
<tr>
<td>Various defense movements</td>
<td>degree</td>
<td>15.85</td>
<td>3.95</td>
<td>20.60</td>
</tr>
</tbody>
</table>

*The value of "t" at significance level (0.05) = 2.09
Table 3: Arithmetic mean-standard deviation and improvement rate and value of "t" between pre and post mean of measurement for the control group (N=20)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit of measurement</th>
<th>Pre Arithmetic mean</th>
<th>Pre standard deviation</th>
<th>Post Arithmetic mean</th>
<th>Post standard deviation</th>
<th>Rate of improvement</th>
<th>Value of &quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catching by hands from the top</td>
<td>degree</td>
<td>1.65</td>
<td>0.59</td>
<td>2.00</td>
<td>0.97</td>
<td>21.21</td>
<td>-1.79*</td>
</tr>
<tr>
<td>whip Passing and receiving on the wall</td>
<td>number</td>
<td>8.70</td>
<td>1.63</td>
<td>10.25</td>
<td>2.17</td>
<td>17.82</td>
<td>-2.92*</td>
</tr>
<tr>
<td>Ball dribbling for 30 m in straight line</td>
<td>second</td>
<td>7.08</td>
<td>0.98</td>
<td>6.80</td>
<td>0.80</td>
<td>4.12</td>
<td>4.61*</td>
</tr>
<tr>
<td>Various defense movements</td>
<td>degree</td>
<td>16.15</td>
<td>3.90</td>
<td>17.35</td>
<td>3.12</td>
<td>7.43</td>
<td>-2.07*</td>
</tr>
</tbody>
</table>

*The value of "t" at significance level (0.05) =2.09

Table 4: Arithmetic mean-standard deviation and value of "t" between the tow post measurements for the tow groups (experimental-control) (N=40)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit of measurement</th>
<th>Experimental Arithmetic mean</th>
<th>Experimental standard deviation</th>
<th>Control Arithmetic mean</th>
<th>Control standard deviation</th>
<th>Value of &quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catching by hands from the top</td>
<td>degree</td>
<td>2.80</td>
<td>0.77</td>
<td>2.00</td>
<td>0.97</td>
<td>2.89*</td>
</tr>
<tr>
<td>whip Passing and receiving on the wall</td>
<td>number</td>
<td>13.50</td>
<td>1.99</td>
<td>10.25</td>
<td>2.17</td>
<td>-4.94*</td>
</tr>
<tr>
<td>Ball dribbling for 30 m in straight line</td>
<td>second</td>
<td>6.12</td>
<td>0.88</td>
<td>6.80</td>
<td>0.80</td>
<td>-2.55*</td>
</tr>
<tr>
<td>Various defense movements</td>
<td>degree</td>
<td>20.60</td>
<td>3.62</td>
<td>17.35</td>
<td>3.12</td>
<td>3.04*</td>
</tr>
</tbody>
</table>

*The value of "t" at significance level (0.05) =2.02

But there isn't any significant statically difference at the level 0.05 between pre and post mean of measurement for the control group in the level of performing the skill of Catching by hands from the top. Since the value of "t" reached -1.79 and the rate of improvement reached 21.21%.

The researcher relates the existence of statically differences between the pre and pos measurement of the control group in some methodological skills (whip passing-ball dribbling-various defense movements) to the use of a traditional program that concentrates on the direct teaching of methodological skills regardless of developing the students' movement abilities at this age.

Consequently, the second hypothesis is achieved " there are significant statistical differences between mean degrees of pre and post measurements for the control group in favor of the post one in the level of performing the course of handball skills (whip passing-ball dribbling-Various defense movements) for the sample under study except the skill of catching the ball from the top that has been rejected.

Results of Table 4 indicates significant statically differences at the level 0.05 between mean degrees of the tow post measurements for the experimental and the control group in favor of mean degrees of post measurement for the experimental group in the level of performing methodological skills under study since the value of "t" varied from -2.55to 4.94.

The researcher sees the surpass of the experimental group over the control one in all the methodological skills could be due to the positive effect of the suggested program applied on the experimental group with all its components of the single lesson (introductory exercises-teaching and developing the course of skills in the main part). The researcher also set and arranged the exercises starting from the introduction and till the final ones according to the aspects and dimensions of movement. This is in addition to the logical consistency of the exercises and the educational steps inside the single lesson and considering the principle of the movement of learning effect among lessons which resulted in appositive effect on learning and surpassing in the level of performance among the experimental group.

The aspects of movement are important because they represent fundamental aspects in the educational process of movement skills. They help to decrease complexity of competition and the need for continuous learning to direct educational activity-facilitate learning and communication increase child's knowledge and to solve problems [3].

The researcher also observes that the program's conformably with students age might have added a type of excitement to the program which is suitable for the properties of that stage for children desire to learn movement skills and to perform all movement duties required from them.

The same idea was confirmed as the properties of the stage from 9:11 years old are considered the golden time to learn physical plays because children at that time are distinguished by fast learning-direction-ability and fast acquisition of the skill in addition to the flexibility and fitness and speed in executing movement duties [1]. These results agree with the results of previous studies [21, 22].
According to what previously mentioned, it is clear that third hypothesis is a achieved " there are statically differences between mean degrees of the tow post measurements for the experimental and the control group in favor of the experimental one in the level of performing the course of methodological skills (catching by hands from the top-whip passing-ball dribbling-various defense movements) of handball sample players".

CONCLUSION

- The educational program has appositive effect on learning some methodological handball skills according to aspects and dimensions of movement (concepts of body knowledge-effort-space and concepts of relations).
- The experimental group that used the educational program surpasses the control group that used the traditional program in terms of the level of skilful performance.

RECOMMENDATIONS

- Encouraging teachers to use the educational program that based on the aspect of movement inside the study plan for students of grade four (primary) in all the rest plays instead of the traditional one.
- Making the teacher's guide by the Ministry of Education which includes models of different physical plays lessons according to the concepts of movement aspects and dimensions.

REFERENCES

