

## **The effect of using a unit reference on the Level some skills in handball for the second phase students of the basic education**

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### **First: Introduction and the Research Problem:**

School is considered one of the educational institutions that work on preparing the students through the academic curricula in general and the physical education curricula in particular, because these curricula aim at achieving the integrated growth within the learners' personality, the matter that provokes the specialists to develop the physical education programs provided for students.

**Amen Anwar El-khouli and Jamal al-din El-Shafei (2000)** mentioned that the contemporary physical education programs are substations for physical education curricula. If the curricula expressed the constructive side, then the programs express the executive side, so they are like a double-sided currency, when it is hard to separate a side from the other one. (4: 30)

**Mahmoud Abdel-Halim Abdel-Karim (2006)** indicates that the educational unit is written plan to teach the specific content of a long plan, the educational unit form renews through a series of plans which consists the unit plan; it is a various and multi plan (5 : 133)

**Fawzy Taha and Rageb Kalzh (1999)** see that, unit reference is an organized group of suggestions focus on some problem, experiences and subjects, and it is organized to serve the teacher during teaching the unit, and to help the learners in planning and guidance of teaching the unit.(8:262)

The most important characteristic of the units – according to the perspective of the researcher- is its applicability, so in this way, it can be applied during the learning and teaching process, it is possible to make the appropriate adjustments

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through the experimentation to reach the stage in which the required criteria are accomplished. The unit reference can contribute to teaching the basic skills of handball for the first-grade of the preparatory school, especially after the increasing the lesson time up to 90 minutes, according to the Ministerial Decree issued in 2011. without any change in the physical education curricula with respect to this decree, which provokes the need for studying how to organize the units in terms of its content, teaching methods, and dividing the lesson parts with respect to the current situation. Throughout the researcher's work at the department of curriculum and teaching the physical education, and his/her supervision over the practical education groups of preparatory schools in Assiut Governorate; the researcher noted the insufficiency of the educational steps and applicable training of methodological skills of the first-grade of the preparatory school in teaching the basic skills of handball sport. By analyzing the teacher's guide of

the preparatory stage, the researcher noted the unavailability of an organized educational content prepared for the teacher and the student in a line with what is appropriate for the students of this stage. That makes the teachers do their best to prepare the lessons depending on their personal experience, the matter that pushed the researcher to use the unit reference, which is characterized by organizing properly the content, which contributes to improve the results of teaching some basic skills in handball for the second phase students of the basic education.

**Second: The research objective:**

The research aims at studying the effect of an educational program by using a unit reference on some methodological basic skills in handball for the second phase students of the basic education through answering the following questions:

- 1- What are the objectives of the proposed educational unit reference?
- 2- What is the lesson content in the proposed educational unit reference?

3- What are the teaching methodologies used in the proposed educational unit reference?

4- What is the assessment methodologies used in the proposed educational unit reference?

**Third: the research hypothesis:**

There were statistically significant differences between the mean scores pre and post measurements of some methodological skills in handball in favor of the mean scores of post measurements of the first preparatory graders.

**Fourth: the plan and procedures of the research:**

**1- the research approach:**

To achieve the research objectives, the researcher used the descriptive approach to build an educational unit reference in handball, and the experimental approach by using the experimental design of an experimental group, which depends on the comparison between pre and post measurements due to its appropriateness to the nature and the conditions of the research.

**2- the research community:**

The research community included experts in the field of curriculum and methods of teaching physical education, experts in the field of handball sport, and first-grade students of Nasser Preparatory School of the Department of Education, Assiut Governorate.

**3- the research sample:**

The research sample was selected in a deliberately random manner; it has composed of two groups as follows:

**a. the sample of building a unit reference:**

The experts in the field of curriculum and methods of teaching physical education, experts in the field of handball sport (16 experts), the researcher has stipulated that any expert's years of experiences should not be less than 10 years of teaching in universities. The percentage of the representation of the experts of the faculty of physical education of the Arab Republic of Egypt ranged between (6.25% - 31.25%).

**b. The experimentation sample:**

The sample consisted of the first-grade students of Nasser Preparatory School of the

Department of Education, Assiut Governorate. The total number of the basic sample members reached (40) students. To select the experimentation sample, it is required that students had not learned nor practiced handball before; they should have the desire to participate in the research.

## **2- Analyzing the content:**

The researcher has read many scientific literature and previous studies related to the research subject to identify the components of the unit reference and building an educational program, as well as counting the elements of fitness related to the methodological skills which are under discussion, in addition to the physical tests and skill tests through which it is possible to measure the physical variables related to the methodological skills that are taught to students, and the contents of the exercises of the proposed unit reference.

## **3- The collecting data tools:**

### **c. Questionnaire form of the unit reference:**

The researcher has designed a questionnaire form

of an educational unit reference in handball of first preparatory graders; it includes (the unit reference objectives, the number of lessons of each skill of the reference skills, the time of each part of the lesson, the appropriate teaching methods, the lesson content within the unit reference, and the appropriate assessment methods)

### **- the steps of building a questionnaire form of the unit reference**

The researcher has read many scientific literature in the field of curriculum and teaching methods and some previous studies related to the unit reference to design the questionnaire form, then the researcher reached (8) axes.

The axes that the researcher reached have been presented to (6) experts in the field of curriculum and handball, during the period starts from 15/8/2012 to 19/8/2012, to express their view on the appropriateness of the axes to the research subject. The result was that the relative weight of the experts' approval on the axes of the questionnaire form of the unit reference ranged between (86.67% : 100%).so the experts have approved all

the axes of the questionnaire form as the form got approval rate of more than 70% of the experts views , the rate which the researcher felt satisfied with.

The researcher has prepared the questionnaire phrases with the assistance of the axes drawn from the experts' view, which measure these axes, so the questionnaire was developed in an initial form.

The result was that the relative weight of the experts' views on the axes and its phrases related to the general objectives of an educational unit reference on handball ranged between (73.33% : 100%). No objective has been excluded; there was agreement of experts' views on the objectives to be achieved. The main skills of handball are (catching, passing, throwing, and defensive moves). The percentage of relative weight of their view has ranged between (73.33%: 100%). No objective has been excluded, but there was a modification in some phrases. Then, the researcher felt satisfied with phrases whose relative weight rate was more than (70%) of the experts' agreement.

The experts' relative weight of the lesson content within the

unit reference ranged between (36.67%: 100%). The researcher felt satisfied with the contents whose relative weight rate was more than (70%) of the experts' agreement. So (the traditional warm-up and the steeplechase warm-up) have been excluded from the axis of the introductory section. The experts' relative weight of the proposed teaching methods to carry out the lessons of the unit reference ranged between (86.67%: 100%). The researcher felt satisfied with the phrases whose relative weight rate was more than (70%) of the experts' agreement. So no teaching method has been excluded. Finally, the experts' relative weight of the assessment methods of the unit reference ranged between (86.67%: 100%). The researcher felt satisfied with the phrases whose relative weight rate was more than (70%) of the experts' agreement. No assessment method has been excluded.

**- the scientific coefficients of the questionnaire of the unit reference:**

Checking the validity and reliability of the unit reference

form; the researcher applied them to a sample of faculty members of the research community and outside the research sample, (7) faculty members. The researcher re-applied them in duration of 15 days, from 8/9/2012 to 22/9/2012. Next, the data were collected to find the correlation coefficient and the intrinsic validity of the axes of the form; the correlation coefficients between the first application and the second application of the axes of the form ranged between (0.88: 0.99), as the intrinsic validity ranged between (0.91: 0.99), and that indicates the validity and the reliability of the form.

**The questionnaire of the unit reference in its final form:**

After finishing the scientific coefficients of the questionnaire and ensuring the validity and the reliability of the questionnaire without deleting any phrase, the questionnaire will be in its final form and ready to be applied on the under researching basic sample. The questionnaire will consist of (5) axes, and the number of the vocabulary included in the questionnaire reached (67) words. The researcher depended on the

form of (agree= 5 . to some extent = 3 , disagree= 1) while correcting the questionnaire.

**b-The skill and physical tests:  
- counting the elements of fitness related to the methodological skills**

To count the elements of fitness related to the methodological skills of the first preparatory grade, the researcher analyzed some content of scientific literature and previous studies related to the research topic. The skills were developed in a questionnaire form, presented to the handball experts to identify the elements of the physical fitness related to the research methodology (under researching). The result was that the relative weight of the experts' views on the elements of the physical fitness related to the research methodology ranged between (33.33% : 100%); The researcher felt satisfied with the elements whose relative weight rate was more than (70%) of the experts' agreement. Thus, the elements of the physical fitness are (muscular power, speed, flexibility, agility, and accuracy).

**- The skill and physical tests:**

After identifying the elements of physical fitness related to the research methodology, the researcher analyzed the scientific literature and the previous studies to identify the required tests to measure the elements of physical fitness and the level of performance of the methodological skills (under researching) of handball. So the physical fitness tests required for this research are ( throwing the ball a farthest distance, running around 30 meters, Barrow test, bending the trunk, throwing , and aiming the ball at overlapping circles ), the tests of skill ( passing and catching for 30 second depending on a wall, aiming 10 balls at the target, and forward and backward defensive moves). The researcher has noted that there are not tests dealt with measuring the level of technical performance of grasping the high ball by hands and catching the ball by hands except through a study for **Hanan Mohammed Jaissh (2005)** She developed a design of two forms to measure technical performance of the two skills through giving a point for each technical skill to identify the level of the skillful

performance with the presence of two arbitrators, so the researcher has used the two forms to measure the skills of grasping and catching. (3 : 79)

**- the scientific coefficients of the skill and physical tests:**

The validity coefficient has been accomplished; the researcher used the validity of differentiation through applying the tests to two groups (distinctive – non-distinctive ) of 30 students, the distinctive group includes the third preparatory graders; the non-distinctive group consists of the research community and outside the research sample. The skill and physical tests were applied to the two groups from 6/9/2013 to 23/9/2012. there were statistically significant differences between the distinctive and non-distinctive groups in all degrees of skills and physical tests in favor of the distinctive group, so values of (v) ranged between ( 2.56 : 19.23 ); it is largest than its tabulated values at the level of (0.05) which shows the validity of the used skill and physical tests.

To find the reliability coefficient, the researcher used the method of applying and re-

applying the test to a sample consists of 30 first preparatory graders, and the sample that used to find the validity, after 4 days of the skills and physical tests during the period from 30/9/2012 to 3/10/2012. There was a statistically significant correlation between the application and re-application in all the skills and physical tests, where the value of "t" ranged between (0.78: 0.99), it is largest than its tabulated value, which shows the stability of those tests.

## **2- the tools and equipments used:**

To achieve the research objectives, the researcher used the Alrstamitr device to measure the length in centimeters, a medical balance to measure the weight in kilograms, a stopwatch to determine the time in some tests and during carrying out the unit reference, handballs, medical balls, hoops and cones.

## **Sixth: the statistical characterization of the sample in the under consideration variables:**

The researcher has conducted the statistical characterization of the sample that consists of (40) students in the under consideration variables. The

value of the coefficient of torsion ranged between (-0.01: -0.37), the values of the coefficient of kurtosis ranged between (0.03: -0.68), they are less than the Significance level of torsion and kurtosis respectively, which indicates that the sample is fairly distributed in all under consideration variables.

## **Building a unit reference :**

1. the objectives of the unit reference:

The objective of the unit reference is to teach the methodological skills of handball to the first preparatory graders

2. the content of the unit reference :

The content of the unit reference includes the objectives, the content, the teaching methods, the accompanying activities, and the assessment methods that help in achieving the general objective of the unit reference.

## **The time-division of the unit reference:**

Carrying out the unit reference lasts for (10) weeks, the lesson lasts for (90), the total time of the nit reference lasts for (900) minutes, with 10 lesson at the rate of a lesson per week.

**The time-division of the lesson parts:**

The experts agreed on the introductory part will last for 20 minutes, the main part will last for 60 minutes and the final part will last for 10 minutes.

The procedures of applying the unit reference:

**A. the pre-measurements:**

The pre-measurements were carried out in the selected under consideration variables on Saturday, 06.10/2012 – 08/10/2012.

**B. Applying the unit reference:**

Applying the unit reference starts on Wednesday, 10/10/2012 – 12/12/2012.

**C. The post-measurements:**

After finishing the application of the unit reference, the post-measurements were carried out for all the members of the sample on Sunday, 16/12/2012 – 18/12/2012.

**The results discussion:**

**The answer of the first question:**

The statistical operations used by the researcher show that the relative weight of experts' responses for the cognitive objectives axis ranged between

(80% : 100%); the relative weight of experts' responses for the emotional objectives axis ranged between ( 82.5 % : 100%). The relative weight of experts' responses for the psychomotor objectives axis ranged between ( 72.5 % : 100%). But, the relative weight of experts' responses for the receiving unit objectives ranged between (70% : 97.50 % ). The relative weight of experts' responses for the objectives of passing skill unit (standstill, moving) ranged between ( 70% : 100%). The relative weight of experts' responses for the objectives of aiming skill unit ranged between ( 75% : 100%). Finally, the relative weight of experts' responses for the objectives of defensive moves skill unit (forward, backward, side) ranged between ( 82.5 % : 100%).

**Makarim Helmy Abou-Hrjha and Mohammad Saad Zagloul (1999)** point out that physical education curricula must be concerned with the cognitive aspects of the activities; in which the activities get a new meaning, at the same time, the outcome of the acquired knowledge gives the appropriate theoretical

background to every learner to interpret the new situations which face him/her. (2:79)

In this regard, **Amen Anwar El-khouli And Jamal al-din El-Shafei (2000)** ensure that the successful physical education curriculum is that which emphasizes promoting the Man's emotion; cares about his/ her behaviors; acquires him/her the supreme principles, and undertakes and respects the religious and spiritual ritual. (4: 77)

**Mahmoud Abdel-Halim Abdel-Karim (2006)** asserts that the psychomotor objective includes the psychomotor activities that depend on the physical responses; the mental processes represent a fundamental aspect in guiding the physical responses, as the psychomotor processes include abilities and skills associated with the man's movement in his/her various activities field. (1: 204)

The researcher took into consideration that the objectives cover all the emotional, cognitive and psychomotor aspects of experience. The researcher finds that when all the objectives get a percentage of higher than 90%, that confirms

the clarity and appropriateness of the research sample (first preparatory graders).

**Makarim Helmy Abou-Hrjha and Mohammad Saad Zagloul (1999)** mention that formulating the objectives is to identify the various educational objectives in a behavioral way or to express the object in phrases that show the he expected outcomes of the educational process. (2:34)

By analyzing the results of experts' responses on the objectives to be achieved from the basic skills in handball ( under discussion ) , we find that the percentage of experts' responses ranged between ( 94.28 % - 100%), which refer to its adequacy , importance, and suitability to achieve the general objectives of the unit reference in handball of the first preparatory grade.

#### **The answer of the second question**

The statistical operations used by the researcher show that the relative weight of experts' responses for the introductory part ranged between ( 92% : 100%); the relative weight of experts' responses for the main part ranged between ( 88.75 %

: 100%). The relative weight of experts' responses for the final part ranged between ( 80% : 100%).

By analyzing the results of the students' responses of the lesson content within the educational unit reference, so the lesson content has been identified with respect to the experts' responses within the educational unit reference in handball, where the introductory part consisted of (small games, warming-up). The main part consisted of (the method of performing a skill, the educational steps of a skill, applied activities); the final part consisted of (calming exercises- small games- recreational games).

The researcher finds that the correct scientific organization of the lesson content within the unit reference is one of the main principles that should be prepared, because it is considered the main tool through which the curriculum objectives can be achieved.

This goes in line with what **Amen Anwar El-khouli** and **Jamal al-din El-Shafei (2000)** mentioned that the content is the entrance to the subject ; it is one of the most important

elements of designing a curriculum. As the selection of the educational activities and tests facilitates achieving the desired outcomes associated with the fields of (psychomotor- emotional-cognitive) behavior. They ensure the learning extent and achieving the objectives depend on the accurate selection of learning materials and experiences.(8 :382)

**Sohair Badier Mosa (1991)**, and **Laila Abdel-Aziz Zahran (1991)** mentioned that the content of the curriculum is consider one of the cornerstones of the elements of the curriculum; the fruitful learning requires the availability of a good content that provides a general framework of the subject for the teacher and the student, through which the desired object can be accomplished. Therefore, the teacher will work on a limited framework of subjects, which facilitates the identifying process of the objectives of each lesson as well as the selection of the appropriate method of teaching, the educational means, and the methods of assessment for the content. (6:80) (9:95)

### **The answer of the third question**

The statistical operations used by the researcher show that the relative weight of experts' responses for the direct methods of teaching axis ranged between (60% : 100%); the relative weight of experts' responses for the indirect methods of teaching axis ranged between ( 62.5% : 92.5% ).

By analyzing the results of the students' responses of appropriate method of teaching of an educational unit reference in handball for the first preparatory graders, the relative weight of experts' responses ranged between (60% : 100%), and the researcher felt satisfied with the methods of teaching whose relative weight rate was more than (70%) of the experts' agreement.

Thereby, the used methods of teaching have been identified to carry out the educational unit reference in handball are the method of presentation and clarification which got a relative weight of (100%). The mutual learning method got a relative weight of (97.50%);

the discovery method got a relative weight of (87.50%). The solving problem method got a relative weight of (92.50%). All the proposed method have been excluded, they are (command, practice, multi-level, creative and self thinking).

**Harrison, Jayce (1996)** indicates that the process of teaching is a series of making-decision which is determined before, during, or after the interaction between the teacher and the student; each of methods of teaching is determined with respect to the size and the quantity of decision associated with teacher, student and the decision-maker. (5:213)

**Fawzy Taha and Rageb Kalzh (1999)** add that the good method is that leads to the clarity of the objective for the learners, and evokes their motivations to perform the activities of education and their familiarity of how to judge the results. (8:113)

### **The answer of the fourth question:**

The statistical operations used by the researcher show that the relative weight of experts' responses for the methods of assessment axis ranged

between (37.50% : 100%). By analyzing the results of the experts' responses of appropriate method of assessment of an educational unit reference in handball for the first preparatory graders, the relative weight of experts' responses ranged between (37.50%: 100%), and the researcher felt satisfied with the methods of teaching whose relative weight rate was more than (70%) of the experts' agreement.

### 1- the research hypothesis

#### The significance of differences between the means of pre and post-measurements, and ETA coefficient of the methodological skills first preparatory graders in handball (N= 40)

S	variables	measurement unit	Pre		Post		percent of improvement	(V) Value	ETA Coefficient ( $\eta^2$ )	Effect size
			SMA	SD	SMA	SD				
1	Overhead catching	Degree	0.85	0.66	1.48	0.88	73.53	-4.41*	0.80	High
2	Side catching	Degree	1.10	0.55	1.43	0.55	29.55	-2.82*	0.59	Average
3	Passing and receiving on a wall for 30 seconds	Number	4.50	0.82	6.23	1.72	38.33	-5.14*	1.32	Too high
4	Aiming 10 balls	Number	2.18	0.59	3.25	1.10	49.43	-5.74*	1.20	Too high
5	Various definitive moves	Degree	17.38	2.85	18.78	3.04	8.06	-6.63*	0.47	low

The (v) value at the level of significance (0.05)= 2.04 \* = significant

The results of the table statistically significant differences at the level (0.05) indicate that there are

Thereby, the use of the method of practical assessment has been identified within the educational unit reference in handball; and that method got a relative weight of (100%). It is represented in 5 practical tests to measure the methodological skills of the first preparatory graders. The educational unit reference has been accomplished through the previous results.

between the means scores of the pre and post measurements of methodological skills (under researching) in favor of the average of the measurement scores, when the (V) value ranged between (-2.82: 5.74). The percentages of the improvement ranged between (8.06%: 73.53%). The effect size of the unit reference ranged between (0.47: 1.32), which ensures that the effect size is high in all the methodological skills of the students, except the defensive moves which ensure that the effect size is low.

The researcher believes that the improvement of the post-measurement is due to the nature of the (proposed) unit reference with respect to the scientific planning and its contents of used objectives, contents, methods of teaching and assessment. Moreover, what the various exercises and educational lesson associated with each skill of the handball of the first preparatory graders, applied and educational activities and integration of the

lesson, the appropriateness of the objectives to each lesson with respect to the scientific principles, in addition to the proper educational exercises and technical steps hold positive effect in its content. The opportunity has provided the positive participating in the various educational activities, which aimed at learning the skillful performance through the exploitation of a desire of controlling the motor performance and learning the motor performance especially the skills, which are characterized by the difficulty of performance as well as the competitive skills.

That goes in line with what **Ibrahim Bassiouny omirh (1991)** indicated that the unit reference is planned to be used by a group of students at any grade, age group, or academic level of the unit reference. The unit reference provides the teacher with many ideas about the important aspects of learning of the unit itself, and the activities of education and learning, as well as the

appropriate educational means.  
(7: 215)

### **Conclusions:**

In the light if the research, its questions and procedures followed by the researcher; the conclusions come as follows:

- 1- Reaching the determinants of building a proposed educational unit reference of methodological skills in handball for the first preparatory graders
- 2- Validity of using the proposed educational unit reference in learning the handball skills for the first preparatory graders
- 3- The proposed educational unit reference has a positive effect in improving the skillful performance in handball (overhead catching- side catching-passing while moving- passing- forward, backward and side defensive moves); that is what the post-measurement indicated, as the percentage of improving theses skills ranged between (24.27%: 98.30%).

### **Recommendations:**

In light of the results, the researcher recommends the following:

- 1- Carrying out the proposed educational unit reference in the light of the determinants shown in the unit reference
- 2- Holding courses for teachers to learn how to use and prepare a unit reference of teaching motor skills inside the primary schools
- 3- The continued focus on building educational units the various fields to be distributed to teachers with the teacher's guide

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