

## **The effect of using multi-levels self-application technique on learning some basket ball skills for juniors**

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### **Research Abstract:**

This study aims to design an educational program using multi-levels self-application technique on learning some Basket ball skills (studied in the research) to the 1<sup>st</sup> year students in Physical Education Faculty – Al-Sadat University. The researcher used the experimental method through the experimental designing of two groups (the experimental – the control) as it suits the nature of the study. The research sample was chosen deliberately from the 1<sup>st</sup> year students - Physical Education Faculty – Al-Sadat University who are registered in the scholar year 2013/2014. They were divided into two groups; the experimental of (22) students who applied multi-levels self-applied technique, and the control group of (22) students who used the traditional method (the orders). The before measurements were performed in physical fitness, intelligence, skill tests and the

knowledge acquisition test: the researcher found the following conclusions: the effectiveness of using multi-levels self-applied technique on learning basket ball skills and increasing knowledge & information level of 1<sup>st</sup> year students in Physical Education Faculty and he found an improvement in favor of the after measurement of the experimental group in basket ball skills of 1<sup>st</sup> year students in Physical Education Faculty.

### **Introduction &**

#### **Problem of the Research:**

Through the researcher's work in teaching for students of Physical Education Faculty, he noticed the decrease of the students' skill level, and also not achieving the educational aims set for the curriculum through the traditional method in learning basket ball skills. This decrease is due to the tight time and the short scholar term or to the students' passivity for being mere receivers of the information. In addition to the increase of students' number

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inside the lecture which increases the burden of the educational process on the lecturer as he is demanded to follow the performance of each student and to correct the mistakes that accompany learning especially the 1<sup>st</sup> year students. Consequently, the teacher needs more time and effort to enrich the educational process and to reach the good and ideal performance of the skills required to learn, in addition to the individual differences among students and their different skill acquisition. This research's importance lies in the following:

- Using the modern educational directions and responding to the repeated educational calls to use good teaching strategies & techniques that may lead to positive results in the educational process.
- Using new technique in learning movements skills in basket ball sport for students of Physical Education Faculty depends on making the students effectively involved in the educational process and affording them the experiences and situations where they can practice teaching and communication skill.

- This research can be a procedural attempt on how to use the self-applied technique in the field of teaching movement skills in the fields of physical education.

#### **Research Aims:**

This research aims to recognize:

- The design of an educational program using multi-level self-applied technique on learning some basket ball skills (studied in the research) to 1<sup>st</sup> year students of Physical Education Faculty – Al-Sadat University.
- The effect of using multi-levels self-applied technique on learning some basket ball skills (studied in the research) to 1<sup>st</sup> year students of Physical Education Faculty – Al-Sadat University.
- The effect of using multi-levels self-applied technique on knowledge aspect of basket ball curriculum to 1st year students of Physical Education Faculty – Al-Sadat University.

#### **Research Procedures:**

##### **First: Research Method:**

The researcher used the experimental method through the experimental designing of two groups (the experimental – the control) as it suits the nature of the research.

##### **Second: Research Sample:**

The research sample was chosen deliberately from the 1<sup>st</sup> year students – Physical Education Faculty – Al- Sadat University who are registered in the scholar year 2013/2014. Their number was 228 student, and research sample was (44) student by the rate 15.3% from the total original sample and were divided into two groups; the experimental group of (22) students who used the multi-levels self-applied technique, and the control group of (22) students who used the traditional technique (the orders). And the pilot sample was (10) students who rated 3.5% of total research society.

### Third: Means & Tools of Data Gathering:

- Reference Analysis  
-Personal

Interview - Objective  
remarks - tests.

• Physical Fitness Test:  
Enclose (2)

• The research used the physical tests battery used in the faculty to measure the physical level to be used in the two groups equivalence before applying the program, these tests were as follows:

**1<sup>st</sup> Test:** Speed Test (running 100 meters) is measured by time.

**2<sup>nd</sup> Test:** strength endurance test (screwing on the horizontal bar) is measured by number.

**3<sup>rd</sup> Test:** Front Jumping Ability Test (long jump by the 2 foot together from stability) is measured by distance.

**4<sup>th</sup> Test:** Agility Test: standing, bending the knees completely, putting hands on the ground, throwing the two legs to the back, the performance is repeated for the biggest number in one minute.

**5<sup>th</sup> Test:** Flexibility Test: standing on a table or a Swedish bench is not less than 30 cm in height, bending the trunk to the front to down to reach the toes to the farthest distance and stability for 3 seconds.

**6<sup>th</sup> Test:** Endurance Test: running for 800 meters.

• **Intelligence Test:**  
Enclose (3).

The researcher applied the verbal intelligence test prepared by “Gaber Abdel Hameed, Mahmoud Ahmed Omar” (2007) (1) which proved its honesty and stability to measure the characteristic it was put for, and the statistical treatments were performed.

• **Skill Tests:** Enclose (4).  
After reviewing the scientific references and the previous

studies, the researcher chose skill tests to measure some attack basic skills in basket ball as follows:

(Chest passing – counter passing – tackling – aiming from under the circle – peaceful aiming – free throw).

- Knowledge Acquisition Test: Enclose (5).

The researcher used the knowledge test in basket ball which was designed by Ibrahim Ali Alwarafy (2).

- The used Equipments & Tools:

- Stop-watch. -
- measuring tape. -
- cones. -medical scale. -
- Board. -restemeter to
- measure heights. -
- medical balls. -
- Swedish bench. -
- colored pieces of chalk.

### **The Suggested Educational Program (educational units):**

Designing an educational program using multi-levels self-applied technique needs good preparation in order to reach the required aim, so the researcher reviewed many references and studies that discussed educational program preparation using different teaching techniques. Through this, the researcher concluded

the following steps to prepare an educational program as follows:

A- Aims of the suggested program (educational units): teaching the 1<sup>st</sup> year students of Physical Education Faculty, Al-Sadat University some basic skills of basket ball.

- Content of the suggested educational program:

The main part of the program consists of a group of papers called work paper or “standard” which include:

- Some basic skills of basket ball “studied in the research”.
- The detailed explanation of the technical steps of each skill with a drawing of the steps of skill execution.
- A group of movement works of each skill which participates in improving performance level through difficulty-gradual performance level.
- The suitable repetition of each movement work to guarantee reaching the best performance level.
- Self-correction of student performance.
- Educational program using multi-levels self-applied technique : Enclose (6)
- Educational Aim:

- The researcher put an aim for the educational unit to be achieved which is to recognize the effect of using self-learning technique on

some basic skills in basket ball ( chest pass – counter pass-tackling – peaceful aiming – aiming from stability).

**Table (1)**

**The differences significance between the two research groups (Experimental – control) in the chosen variables (physical – intelligence)**

N1=N2=22

Variables	Measure unit	Control group		Experimental group		(T) value	
		M	S	M	S		
physical	Speed	Second	13.96	0.54	14.15	0.49	1.12
	Strength endurance	Meter	7.77	2.49	7.45	2.40	0.43
	Muscle strength	No.	2.25	0.16	2.23	0.14	0.42
	Agility	No.	32.86	4.67	32.00	4.76	0.59
	Flexibility	Cm	8.86	3.06	9.23	3.15	- .385-
	Endurance	Second	2.94	0.37	3.02	0.34	- .637-
	Intelligence	Degree	68.59	7.00	70.50	7.21	- .957-

(T) table value at level 0.05= 1.72

Table (3) shows the lack of statistically shown differences at level 0.05 between the two groups (the experimental & control) in the growth variables, skill variables, knowledge acquisition and intelligence test studied in the research which indicates the equivalence of the two groups

of the research in these variables.

- time distribution of the program:

**Bases of putting the educational units:**

- the researcher put the suggested educational units of some basket ball skills studied in the research and were divided into two study units,

each unit contains five lessons as two lectures weekly, time of each unit is (90) min. for each experimental group, thus, the program took 8 consecutive weeks.

The details of educational unit as follows:

Warming (5 min.)

Physical Preparation(10 min.)

Trainings of ball control (10 min.)

The main part (educational activity) (application activity) (60 min.)

Closure (5 min.)

#### **Sixth: Basic Experiment:**

The suggested educational program using multi-levels self-applied technique was applied on research sample of the experimental group from 1<sup>st</sup> year students of the faculty in the period from Sunday 13/10/2013 to Monday 9/12/2013 as 2 educational units per week. Unit time took (90) min. for the experimental and the control groups, the total number of education hours to execute the program was 24 hours, and the suggested program took 8

weeks to execute. Enclose (6). The researcher used the experimental method as two groups were chosen; experimental & control groups of (44) students for both groups. The control group used the traditional method (the orders) enclose (7). The total number of hours to execute the suggested program was 24 hours. The program was applied (in the basket ball playground of the faculty). Enclose (6).

**The After Measurement:** the after measurement of both research groups was performed on 15-16/12/2013.

#### **Seventh: Statistical Treatments:**

The researcher treated the study statistically using the statistical program SPSS.

1- The percentage rate, the arithmetic means and the standard deviation.

2- Differences significance.

#### **Results display & Discussion:**

First: Results display: in the light of research aims and its procedures, the researcher displayed the research results as follows:

**Table (2)**

**Differences Significance Test of Differences' averages between the two after measurements of the experimental & the control groups in the skill variables studied in the research N=22**

Variables	Measure unit	Experimental group		Control group		Differences average	"T" value
		M	S	M	S		
Chest passing	No.	24.27	0.32	21.13	3.15	3.15	*-5.70-
Counter passing	No.	16.32	0.35	15.82	0.50	0.50	*-1.86-
Tackling	Sec.	6.13	0.50	6.40	0.26	-0.26	*2.06
Aiming from under the circle	No.	14.73	2.00	12.77	-1.95	1.95	*-4.41-
Peaceful aiming	No.	15.00	0.93	10.45	-4.55	4.55	*16.41-
Free throw	No.	12.91	1.48	10.41	-2.50	2.50	*-5.5-

“T” table value at morale level (0.05) = (1.72)

Table (2) shows the differences significance between the two experimental & control groups in testing the differences significance between the two after measurements in the skill variables studied in the

research. It is clear that there are statistically shown differences between the experimental & control groups in the skill variables in favor of the after measurement.

**Table (3)**

**Differences significance test of differences' averages between the two after measurements of the experimental & the control groups in the knowledge variables studied in the research N=22**

Variables	Measure unit	Control group		Experimental group		Differences average	(T) value
		M	D	M	D		
Knowledge test	No.	28	4.93	36.27	3.93	8.27	*-7.69

“T” table value at morale level (0.05) = (1.72)

Table (3) shows the differences significance between the two after measurements of the control & experimental groups

in the knowledge test studied in the research. It is clear that there are statistically shown differences between the control

& the experimental groups in the knowledge test in favor of the experimental group.

### **Second: Results Discussion & Explanation:**

In the light of research aims, theses and results which the researcher concluded and from the data of the two experimental & control group and the statistical treatments, the results were as follows:

#### - Discussion & Explanation of 1<sup>st</sup> thesis results:

Table (2) data shows the existence of statistically shown differences between the two experimental & control groups in the after measurement in the skill performance level of the chosen skills (studied in the research) of basket ball to the sample research of 1<sup>st</sup> year students "passing, aiming, and tackling" in favor of the experimental group as the was to achieve the final goal through giving the teacher the opportunity to choose his beginning level according to his abilities, tendencies and readiness. And when executing the movement work which defines his beginning level, he moves to the next movement work until he achieves the final goal without being committed to the teacher's speed in teaching which he usually defines depending on his own estimations of what the average learners need of time to learn as in the traditional method. This technique has a positive effect on the performance level concerning what it provides information and performance sequence accompanied by

diagrams and educational directions (guidelines) through an educational means called "work paper" through which correct judges and self-correction are issued. Also, this method suits such skills, this agrees with Magdy Fahim and Mohammed Zaki (2005) (3), and Afaf Abdel Karim (1994) (4) assures that the self-application technique makes the learner responsible for self-correction process according to the standard (the teacher's design which makes the learner get used to self-dependence. The researcher also sees that the experimental group superiority over the control group in the skill level is due to giving everybody the opportunity to be busy in working, and not excluding any of the learners. As practice is performed according to the learner's level where he can control, positively participate and react to program contents. While the traditional method (verbal explanation & practical performance level) does not enable some students to follow the explanation and to understand what is wanted from them. Also some of them cannot see the skill pattern correctly from different angles; consequently, they do not get a clear and correct image of the technical aspects of skill performance.

This agrees with what "Enayat Mohammed Farag" (1998) referred to that to form the learner's personality you should not apply the educational and teaching

activity on all the learners and to ask them the same educational results without taking into consideration the individual differences. The development of the learner's personality can be reached depending to the aims included in the curriculum if the educational process coped with pushing the students to wake their tendencies along with taking their needs into consideration. (5: 19)

Also, what distinguishes this method is that it gives the learner the opportunity to make the suitable feedback of his performance which is one of the factors that lead to the performance improvement. This agrees with the studies of Hanan Mohammed Abdel Latif (1998) (6), Zeinab Ismail, Khaled Ezzat (1998) (7), Essam Mohammed Azmy (1998) (8), Ahmed Elsaied Elmowafy Khatab (1999) (9), Sally mohammed Abdel Latif (2001) (10) that the multi-levels self-applied technique excelled the traditional method in learning different sports.

This proves the 1<sup>st</sup> hypothesis of the research which states that there are statistically shown differences between the experimental group (using the multi-levels self-applied technique) and the control group (using the traditional method) in the after measurement average of basket ball skills studied in the research in favor of the experimental group.

### **Discussion & Explanation of the 2<sup>nd</sup> Hypothesis:**

- Table (3) shows that there are statistically shown differences between the experimental & the control groups in the knowledge acquisition level of 1<sup>st</sup> year students (research sample) in favor of the experimental group as "T" calculated value was bigger than "T" table value at certain level.

The researcher attributes this result to that the multi-levels self-applied technique affords the learner's a feedback that helps in diagnosing mistakes and reviewing them. Since the general aim of the educational process is to graduate students who enjoy a lot of information, rich knowledge, organized memory, connected ideas and have different scientific skills in order to use them in serving themselves and their society, he does not recommend to use the traditional method in learning information and knowledge which depend on listening and memorizing; in which the learner's role is being only a receiver and may be this the reason behind the superiority of the multi-levels self-applied technique in which the learner's role is to take the learning responsibility as he himself searches for the correct information. The researcher attributes these statistical differences between the two after measurements averages of the experimental & the control groups to that using the multi-levels self-applied technique is considered one of the learning techniques that affords the

learner's the feedback which helps in diagnosing and correcting the mistakes, and also helps to keep the information in the learner's memory for a long time. Moreover, when the information exists in the student's reach, this makes him search for it and does not just satisfy with hearing it. This agrees with the opinion of Marwa Ali (23). And in this regard, Abdel Salam Mustafa (2000) (12) and Omar Badran (13) mention that the explanation and pattern performance technique does not achieve the learner's self and does not allow him to participate mutually and positively according to the modern education calls.

This also agrees with "Hussein Kamel" (1999) (14) that he mentioned the learners have not the same level, and that we must keep in mind that education deals with the different elements of the learners as each person has his own characteristics that differ from any other person.

The researcher also attributes the multi-levels self-applied technique superiority to that it depends on the self-knowledge of each learner who sets his own stage aims in all fields of his knowledge mind maturity, emotional impulse, and physical movement; as it allows him to choose freely which helps in keeping the information until it is recalled.

The researcher also attributes the superiority of the experimental group over the

control group in the knowledge acquisition level to using the educational program studied in the research of what it contains of many techniques that enriches the knowledge aspect of the learners through developing the ability to criticize, analyze and observe skill details through the standard paper of the suggested educational program. This agrees with Sohir Elabany (1991) (15) who indicates that the learner is greatly affected with the methods and techniques used by the teacher which are based on experiment and application that make its effect easier and faster than the traditional learning. New techniques in teaching have appeared which help to transform the educational process from the material taught to the learner, therefore, the material became a means and not an aim in itself.

This result proves the 2<sup>nd</sup> hypothesis of the research which states that "there are statistically shown differences in the knowledge acquisition level between the experimental group (using the multi-levels self-applied technique) and the control group (using the traditional method) in the after measurement averages in favor of the experimental group.

**Conclusion & Recommendations:**

**First: Conclusions:**

In the light of research aims and hypotheses and in the limit of research sample and what the statistical results

indicate, the researcher reached the following conclusions:

- The effectiveness of the multi-levels self-applied technique in learning basket ball skills of 1<sup>st</sup> year students of Physical Education Faculty in learning skills.

- The existence of an improvement in favor of the after measurement of the experiment group in basket ball skills of 1st year students of Physical Education Faculty.

- The existence of an improvement in favor of the after measurement of the experiment group in increasing knowledge and information level of 1st year students of Physical Education Faculty.

#### **Second: Recommendations:**

In the light of what the study reached of conclusions, the researcher recommends the following:

1- To pay attention to the multi-levels self-applied technique in learning basket ball skills.

2- To pay attention to the multi-levels self-applied technique in learning sport activity in different education stages.

3- To prepare teaching courses in the physical education faculties to train student and female student on

how to use the multi-level self-application.

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