

## **The effect of using an educational program using the (contrasting) style on learning some basic skills of volleyball**

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### **Research Introduction & Problem:**

Ibrahim Mahmoud Fahmi (2008) sees that the contrasting style depends on merging more than one teaching style in one form in order to build different teaching forms that take into consideration the attitudes and tendencies of the learners, and guarantee diversity; as it contains a group of methods used in teaching motor skills in parallel. These methods differ from one skill to another according to the skill type and to individuals' characteristics. Examples of these methods include (orders – applying by directing peers “reciprocal” – multi-levels self-application – guided discovery). (1: 37)

Due to the importance of applying by directing peers “reciprocal” and multi-levels self-application methods, both of them were chosen to be applied in teaching volleyball skills studied in the research for the 1<sup>st</sup> year students in faculty of physical education.

As the method of reciprocal teaching affords different teaching situations among the students and gives the student the opportunity to be a teacher once and a performer once. This method depends on dividing the students into pairs one of them performs the required skill while the other plays the role of the observer of his colleague's performance where he instructs him with guidance and feedback after each attempt, then, they exchange the roles (the performer and the observer). Therefore, this method is like affording a teacher for each student through the standard paper and referring to the teacher if needed. This method helps in improving and raising the performance level of students.

As for the multi-levels reciprocal application method, it is one of the teaching methods that take into consideration the individual differences among students

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through introducing the motor duties of each skill from easy to difficult. It also takes into consideration the student's way and level of thinking, accordingly, the process of choosing the motor duties of each skill emerges from the student himself not from the teacher, when introducing him to one skill. (28: 62-63)

Through the researcher's observance during his academic work and practical experience, he found that despite the diverse and various teaching methods, the vast majority of physical education teachers use the orders method that depends on verbal explanation and a model, which results in the student's negativity in getting the information. It also leads to the fact that information does not remain long in his memory; also, that he does not get the complete motor image of the skill performed by the teacher due to weak model or weak information related to the skill. This leads to the lack of opportunity to develop the practical abilities of students, which in turn results in weak learning level related to applying the practical aspects of the motor skills in volleyball. Enabling the practice of practical and mind

performance helps in making this practice remains for longer period in the learner's experiences' stock. In addition, using methods that make the student participate in the teaching process by practice and evaluation makes him gain an experienced eye that can be used during his next professional work as physical education teacher or coach of volleyball.

This urged the researcher to use the contrasting styles (applying by directing peers "reciprocal" – multi-levels self application) and to recognize their effect on the performance level of some basic skills in volleyball of 1<sup>st</sup> level students of volleyball in physical education department in physical education faculty in Om Alqura University, which may give the researcher the opportunity to supervise all the students in the same time. Enaiat Mohamed Farag (1998) confirmed that it is necessary to apply the scientific thinking and the scientific and technical method in designing and executing educational curriculums and its teaching methods in order to reach the highest performance levels according to the learners' abilities and characteristics in

different educational levels.  
(15: 1)

**Research Aim:**

The research aims to design an educational program using the contrasting style and to recognize its effect on:

Learning some basic skills of volleyball (opposite serve from down – serve from top – passing from the top forward – passing from down arms) of 1<sup>st</sup> level students of volleyball in physical education department in physical education faculty in Saudi Umm Al-Qura University.

**Research Theses:**

1- There are statistically significant differences between the before and after measurements of the experimental group in the learning level of some basic skills in volleyball studied in the research in favor of the after measurement average.

2- There are statistically significant differences between averages of the before and after measurements of the control group in the learning level of some basic skills in volleyball studied in the research in favor of the after measurement average.

3- There are statistically significant differences between the two after measurements averages of the experimental

and control groups in the learning level of some basic skills in volleyball in favor of the average of the experimental group.

**Research Procedures:**

**First: Research Method:**

The researcher used the experimental method, by using the experimental design of (before & after measurements) of the both groups experimental and control, as it suits the nature of the research.

**Second: Research Society & Sample:**

**a- Research Society:**

The research society represents the 1<sup>st</sup> level students of volleyball course in physical education department, faculty of physical education, Om , Umm Al-Qura University, Kingdom of Saudi Arabia.

**b- Research Sample:**

The research sample was chosen deliberately, from the 1<sup>st</sup> level students of volleyball course in physical education department, in Faculty of Physical Education, Umm Al-Qura University, Kingdom of Saudi Arabia, scholar year 2015/2016, second semester. The number of research basic sample is (70) students, divided into two groups:

- First group (experimental): (30) students

who were submitted to the contrasting style in learning.

- Second group (control): (30) students who were submitted to the method of verbal explanation and performing practical model (traditional method) in learning.

The researcher used (10) students from the same research society and outside the basic sample, he also used (10) players from the Saudi Alwehda Club – (study pilot sample) – in order to calculate the scientific transactions (validity – reliability) of the tests used in the research.

**Equivalence of study basic sample:**

**Table (1)**

**The significance of differences between the before measurements averages of both research groups experimental and control in the (studied) variables N1 = N2= 30**

Variables	Measurement unit	Experimental group		Control group		Difference between two averages	“T” value
		M/	±S	M/	±S		
Growth variable	Time age	Year	18.03	0.01	0.01	0.47	0.23
	Height	cm.	179.60	2.61	2.61	2.00	0.17
	weight	Kg.	67.07	2.00	2.00	2.72	0.43
Physical variables	Muscular ability of legs	cm.	1.87	0.09	0.09	0.10	0.01
	Transitional speed	Sec.	3.99	0.22	0.22	0.24	0.08
	Agility measurement	Sec.	11.97	1.04	1.04	1.71	0.07
	Muscular ability of arms	cm.	0.40	0.21	0.21	0.19	0.06
	Flexibility	cm.	9.73	1.41	1.41	1.20	0.00
Basic skills	Over hand Serve	degree	6.10	0.66	0.66	0.73	0.03
	Under hand serve	Degree	7.27	0.79	0.79	0.81	0.37
	Over hand Pass	Degree	10.10	0.71	0.71	0.86	0.30
	under hand pass	Degree	0.17	0.70	0.70	0.07	0.03

“T” table value at free degree (58) and significance level (0.05) = 2.000).

Table (1) shows the lack of statistically significant differences between the experimental and control

groups in the growth variables of the before measurement and the (studied) physical and skill tests in volleyball which

indicates the equivalence of both groups in these variables.

### **Third: means & tools of data gathering:**

For gathering data and information related to this research, the researcher used the following means and tools:

1- References survey:

The researcher reviewed the scientific references and studies related to the topic of this research (1), (4), (5), (7), (12), (19), (22), (25), (26), and (32), to make use of them in supporting the result of the current research.

2- Personal Interview:

Many interviews were made with an expert in the field of curriculums and teaching methods.

3- Forms of data registration: enclose (2).

Forms were prepared to gather data related to research sample to be taken and treated statistically.

4- The tests used in the research:

a) Physical tests of volleyball sport: enclose (3)

The researcher concluded the following physical tests:

- Wide jump test to measure “muscular power of legs”.

- (20) m. running test to measure “transitional speed”.

- Paro test to measure “agility”.

- Throwing a medical ball test to measure “muscular ability of arms”.

- Bending the trunk from sitting to measure “flexibility”.

b) Tests of the (studied) basic skills: enclose (4)

The researcher concluded the following skill tests:

- The test of repeated passing to the wall to measure “accurate passing from top”.

- The test of repeated passing to the wall to measure “accurate passing from down”.

- The test of serving from down to measure “accurate serve from down”.

- The test of serving from top to measure “accurate serve from top”.

### **Fourth: Scientific Transactions of the tests used in the research:**

The scientific transactions of the (studied) physical & skill tests:

a. The validity of the (studied) physical & skill tests:

The differentiation validity of the studied variables was used on two even groups each of (10) persons, one of

them represent the pilot study taken from the research society (undifferentiated), and the other group of volleyball players in Saudi Alwehda Club (differentiated group), during two days, Tuesday and Wednesday 9 – 10/2/2016, “T” table value at free degree (18) and significance level (0.05) = (2.101).

There were statistically significant differences between the differentiated and the non-differentiated groups in all the physical and skill tests used in favor of the differentiated group, which indicates the validity of the studied skill tests.

b. The reliability of the studied physical & skill tests: The researcher found the reliability transactions of the physical and skill tests using (Test – Retest) method on a sample of (10) students from

the 1<sup>st</sup> level volleyball curriculum from the same research society and outside the research basic sample (the non-differentiated group). The researcher considered the reliability results of the non-differentiated group as the first application, then he re-applied the test under the same conditions and instructions after (7) days; on Tuesday 16/2/2016. “R” table value at free degree (8) and significance level (0.05)= (0.632).

It was clear that there is a correlative statistically significant relationship between the first and the second applications in the studied skill tests of volleyball, which indicates the reliability of these studied tests.

Fifth: the suggested educational program (enclose 5 and 7)

**Table (2)**

**Distribution of the skill trainings on educational program units**

Week / skills		Over hand serve	over hand pass	under hand pass	Over hand Serve
First	1 <sup>st</sup> educational unit	Style of directing peers “reciprocal”			

**Follow Table (2)**

**Distribution of the skill trainings on educational program units**

<b>Week / skills</b>	<b>Over hand serve</b>	<b>over hand pass</b>	<b>under hand pass</b>	<b>Over hand Serve</b>
Second	2 <sup>nd</sup> educational unit	Style of multi-level self- application		
Third	3 <sup>rd</sup> educational unit		Style of directing peers “reciprocal”	
Fourth	4 <sup>th</sup> educational unit		Style of multi-level self- application	
Fifth	5 <sup>th</sup> educational unit			Style of directing peers “reciprocal”
Sixth	6 <sup>th</sup> educational unit			Style of multi-level self- application
Seventh	7 <sup>th</sup> educational unit			Style of directing peers “reciprocal”
Eighth	8 <sup>th</sup> educational unit			Style of multi-level self- application
Ninth	9 <sup>th</sup> educational unit		Style of directing peers “reciprocal”	Style of multi-level self- application
Tenth	10 <sup>th</sup> educational unit	Style of directing peers “reciprocal”		Style of multi-level self- application

Time distribution of the suggested educational program:

- The period of applying the suggested program was defined of (10) weeks.
- Number of educational units in the week (1) educational unit.

- Number of educational units in the program (10) educational units and time of the unit is (90) min.

Applying the suggested educational program:

The suggested educational program was implemented using the contrasting style on the experimental group, and applying the traditional method (orders) on the control group in the period from 23/2 to 26/2/2016, the researcher followed the following steps:

- Teaching the same part of warming up for both the experimental and control groups.
- Teaching the part related to the physical preparation of both the experimental and control groups.
- Teaching the educational part as follows:

**a- The experimental group:**

Using the contrasting style (applying by directing peers “reciprocal” – multi-levels self-application) by exchanging; meaning that, one teaching unit in which the researcher uses the method of peers directions “reciprocal”, through standard paper where students are divided into pairs; one student performs the used skill and the other observes his

colleague then they exchange the roles.

- Then, in the second teaching unit, they use the multi-levels self-application method; the student chooses the level from which he will start learning the skill through steps prepared in the standard paper; this is done through several steps from easy to difficult, and the learner has to choose the step or the level that suits his abilities, and the teacher observes the student performance.

b- Control group:

**Using order method (enclose 6).**

c- Teaching the same final part of the two experimental and control groups.

**Sixth: steps of research application:**

a) Before measurements:

The before measurements were performed on the two experimental and control groups in the variables (time age – height – weight – physical variables related volleyball – studied basic skills) on Tuesday 26/1/2016 for the experimental group, and Wednesday 27/1/ 2016 for the control group.

b) Applying basic experiment:

The researcher applied the educational program using



the contrasting style (applying by directing peers “reciprocal” – multi-levels self application) by exchanging on the experimental group on Tuesday 23/2/2016 to Tuesday 26/4/2016 (1<sup>st</sup> and 2<sup>nd</sup> lectures). Also applying the educational program using the traditional method (verbal explanation and performing the practical model) on the control group in the period from Tuesday 23/2/2016 to Tuesday 26/4/2016 (3<sup>rd</sup> and 4<sup>th</sup> lectures).

c) After measurements: The researcher performed the after measurements of both the experimental and control groups in the performance level of studied basic skills, on Wednesday 27/4/2016, the researcher took into consideration to perform the

after measurements under the same conditions of the before measurements.

**Seventh: statistical treatments:**

In lights of research aims and theses, the researcher used the statistical treatments by using (SPSS) program to perform the calculation and statistical operations of the research which are:

- Arithmetic medium.
- Standard Deviation.
- Mediator.
- Coefficient of torsion.
- “T” test to calculate differences significance.
- Liberson simple correlation coefficient.
- Improvement rates.

**Display & Discussion of Results:**

**Table (3)**

**The significance of the statistical differences between the two after measurements of the experimental and control groups in the level of learning (the studied) basic skills N1= N2= 30**

Skill & physical tests	Measurement unit	Experimental group		Control group		Difference between averages	“T” value
		M/	±S	M/	±S		
Serve from opposite top	Degree	17.03	1.63	11.27	1.46	0.767	*14.193
Serve from down	Degree	14.03	1.07	10.27	1.26	4.267	*11.423

**Follow Table (3)**

**The significance of the statistical differences between the two after measurements of the experimental and control groups in the level of learning (the studied) basic skills N1= N2= 30**

Skill & physical tests	Measurement unit	Experimental group		Control group		Difference between averages	“T” value
		M/	±S	M/	±S		
Passing from top to forward	Degree	٢٤.١٣	١.٢٥	١٨.١٧	٠.٧٥	٥.٩٦٧	*٢٢.٠٤١
Passing from down	degree	١٨.٤٣	٢.٦٤	١٢.١٧	١.٣٧	٦.٢٦٧	*١١.٣٦٩

The “T” table value at free degree (58) and significance level (0.05) = (2.000).

Table (3) shows that there are statistically significant differences at morale level 0.05 between the two after measurements of the experimental and control groups in all the studied basic skills of volleyball in favor of the experimental group.

Table (3) and figure (1) show the lack of statistically significant differences between the two after measurements of the students of both the experimental and control groups in the level of learning all the (studied) basic skills.

The researcher attributes the improvement of the experimental group to applying the educational program using the contrasting style which effectively contributed in raising the skill performance level of the studied volleyball skills, and also developing the

cognitive emotional aspect as the student normally stores the information in certain centers in the brain (the memory where he recalls them to be used if needed which is called the feedback; the style used in teaching the experimental group develops the feedback, as the student is being qualified to be a physical education teacher; because improving the student skill in following and correcting the skill performance is considered a skill that must be trained.

In addition, this method enables the student to choose the level from which he will start, which gives him the opportunity to continuously repeat the correct performance of the skill from the level that suits his abilities; which contributes in increasing his ability of quick acquisition of

basic skills, and to lessen time and effort required for learning. This agrees with the study results of Mohamed Saad Zaghlol and Hisham Abdel Haleem (2000) (17), Fayza Mohamed Shebl (2001) (16), Ibrahim Mahmoud Fahmy (2008) (1), and Hend Abdel Gawad Darweesh (2015) (23) where they referred to the importance of the contrasting style and the necessity of applying it, as it is used to diversify the methods used in teaching and to provide diverse educational situations that suit as many learners as possible. It also helps in improving and raising the skill performance level of the learners and increases their motivation to learn and feel content, happiness and suspense during the performance, and urges the self-dependence in discovering facts and information, also to achieve cooperation and spread the mutual respect among students.

Thus, the 3<sup>rd</sup> thesis is achieved which states that **“there are statistically significant differences between the average of the two after measurements of both the experimental and the control groups in the**

**level of learning some basic skills of volleyball in favor of the average of the experimental group”**.

**Conclusions & Recommendation:**

**First: Conclusions:**

In light of research aims and theses, in the limit of research sample, and depending on the statistical treatments and its results, we can conclude the following:

1- The contrasting style (applying by directing peers–multi-levels self-application) positively effects on learning some (studied) basic skills in volleyball of the experimental group students.

2- The traditional method (verbal explanation and the performance of practical model) positively effects on learning some (studied) basic skill in volleyball of the control group students.

3- The contrasting style (applying by directing peers–multi-levels self-application) was more effective and positive than the traditional method in learning some (studied) basic skills in volleyball.

4- The experimental group was better than the control group in learning some basic skills (underhand serve–

overhand serve – overhand pass – underpass) in volleyball.

**Second: Recommendations:**

1- To use the contrasting style (applying by directing peers – multi-levels self-application) in teaching volleyball skills in the physical education faculties.

2- To include the contrasting style (applying by directing peers – multi-levels self-application) in the teaching methods curriculums of team games in the physical education faculties.

3- To pay attention to training the teaching staff and their assistants in the faculty of physical education on the way of using the contrasting style (applying by directing peers – multi-levels self-application) in teaching different scholar curriculums.

4- To make similar studies using new and creative methods on the students of physical education faculties in Saudi Arabia.

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