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## Effect of peer-learning method on the development of students' skill performance

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### Abstract

The intent of this study is to find out the effect of peer learning method on students' skill performance in practical courses of sport science regular students and also, Objective of the study to indicate the effect of peer learning method on the students' skill performance of practical courses, The design of the study used was preferred to undertake applied type of research with the descriptive form of study and semi-experimental longitudinal study. The sample of male taken was 42 and female was 18 of which 70% and 30% respectively, and then the total sample size was 60. The result shows that the hypothesis manipulated as the effect of peer learning method on the development of students' skill performance has significantly accepted. Pre and post-test of Johnson dribbling skill means were 30.27 and 33.23 respectively, and then their significant difference of 0.00, which is less than 0.05 level of significance Whereas, pre and post-test of Volleying volleyball skill means were 31.57 and 37.57 respectively, with their significant difference of 0.00; which is less than 0.05 levels of significances. The researcher concluded that peer learning is especially effective in the development of new skills, with peer tutoring in physical education commonly demonstrating enhanced learning and achievement.

**Keywords:** Peer-learning, Basketball skills, volleyball skills and students' performance

### 1. Introduction

#### 1.1 Back ground of the study

Peer learning is a form of cooperative learning that enhances the value of influential interaction among peers (students-students interaction) and results in various advantageous learning outcomes<sup>[1, 2]</sup>. Explained that it is important to understand the difference between "working in a group" and "working as a group", the former one tells us the contribution of individual's effort for a group but the later one is activity of the group will be the outcome and the effect will be interpreted as one. Even though there is difference in meaning the cooperative learning has five major elements which are crucial for successful learning, these are interpersonal and small-group skills promote face to- face interaction, positive interdependence, individual accountability, and group processing<sup>[3]</sup>. Even if group work is defined as 'pupils working together as a group or a team'.

Showed that the Kagan model (1985)<sup>[4]</sup> refers to cooperative learning that encourages active participation of group members, individual assessment, and incentives in the form of group rewards. This is accomplished through various structured activities like fundamental sport skills which involving individual reflective feedback with partners and sharing the skill to the group. Cooperative learning involves students working in small groups to complete tasks or projects. Tasks are structured so that each group member contributes to the completion of the task. Success is based on the performance of the group rather than on the performance of individual students.

Cooperative learning is a highly structured learning and teaching approach that has been defined by<sup>[3]</sup> as 'the instructional use of small groups so that students work together to maximise their-own and each other's learning'.

<sup>[5]</sup> Peer learning is defined as learning together in small, structured and heterogeneous groups to master the given content. It is also the instructional model that focuses on meaningful participants' of learning. It shows that "The students are not only responsible for learning the material, but also for helping their group-mates learning<sup>[6]</sup>" Peer-Learning – is a learning approach that a group of students who have been intended to acquire skills and experience of

sports cooperatively in practical course. Cooperative Learning (CL) is an instructional model that also shifts the focus of learning to the student. A primary goal in CL is that each student becomes a meaningful participant in learning.

[7] Said that in addition there is evidence from research supporting cooperative learning as a means of raising attainment and it has been identified as an appropriate learning and teaching approach for Curriculum for Excellence. Cooperative learning is a complex pedagogy where learners are required to work together in groups and pairs (Jolliffe 2007). This is not traditional group work which is more ad hoc and lacks structure [3] and training is required in the approaches and how to manage lessons. It does however contain structures [8] for activities that are not subject specific and are thus adaptable in any curriculum area, although tasks can be developed for specific subject use. Cooperative learning was the chosen pedagogy as it has been recognised as 'one of the best practices in education' (Sapon-Shevin 2004, 3) and the tutor was skilled in this area.

[9] Stated that there is a growing body of research in education that reports the benefits of cooperative learning. Substantial evidence exists to support the idea that students working in small cooperative groups can master material presented by the teacher better than students working on their own. Cooperative learning also has social outcomes such as positive inter-group relations, the ability to work collaboratively with others, and the development of self-esteem. Learning lesson, all students contribute to group work, and students rely on each other to complete the task. [10] It is obvious that the result of the group increased because of the success is based on the performance of the individual's contribution to the completion of the task.

[5] Described that mainly students have been responsible to their own learning, because the students are the center of the teaching learning process. And also many educators believe that students rather than the teacher should be at the center of the teaching and learning process. I.e. the students take more part of learning in the process than that of the teacher and the responsibility for expected development of sport skill performance. Because of the objectives have been designed in terms of students' change of behaviour, by denoting they are the centre of the courses.

[11] Similarly, explained that "If all group members agree that the performances were correct, the group begins learning and performing the next skill. If there is disagreement, students continue working on the performances until all agree." From a pedagogical point of view, the crucial variable in peer learning is active involvement of the learner in the learning situation as opposed to his or her passive exposure to material, while lecture attendance is one of the most passive forms of learning

## 1.2 Objective of the study

- To indicate the effect of peer learning method on the students' skill performance of practical courses.
- To identify the interventions from peer-learning that enhances the students' sports skill performance.
- To analyse the effect of peer learning method on the development of sports skills performance.

## 1.3 Hypothesis

- Peer-learning method will have positive effect on the development of students' skill performance.

## 2. Materials and Methods

The design of the study used was preferred to undertake applied type of research with the descriptive form of study and semi-experimental longitudinal study. The total number of undergraduate regular students was 168 from which 29 were females and 139 were males. Selected female students were distributed proportionally to each group. The sample of male taken was 42 and female was 18 of which 70% and 30% respectively, and then the total sample size was 60. Their age range from 18-27 and mean was 20.70 with standard deviation  $\pm 1.418$  obtained by calculation.

### 2.1 Data collection tools

The skill test that were standard have been used in both Volleyball and basketball subjects. AAHPERD volleyball skill test items were used, like Volleying, serving, passing and setting-up volleyball. Johnson basketball skill test items were measured on the students such as field goal (shooting), passing basketball and dribbling basketball. The researcher used the observation check list to incorporate and triangulate the effect of peer learning on students' behaviour that can be observable and recorded in predetermined items. And their reliabilities were checked by cronbach's alpha that was highly reliable.

### 2.2 Method of Data Analysis

The data were manipulated by using SPSS software program in which ANOVA was used to analyse the effect of each situation and interventions on the students' performance and also applied statistical analysis for of mean and standard deviation by sample T-test for comparison of pre and post skill tests of basketball and volleyball courses among the groups of the students. Finally, the results were represented by charts, graphs and diagrams in order to make as simple as to understand the result of the study.

## 3. Results and Discussions

The result of the study is explained and presented clearly in figures and tables as follows:

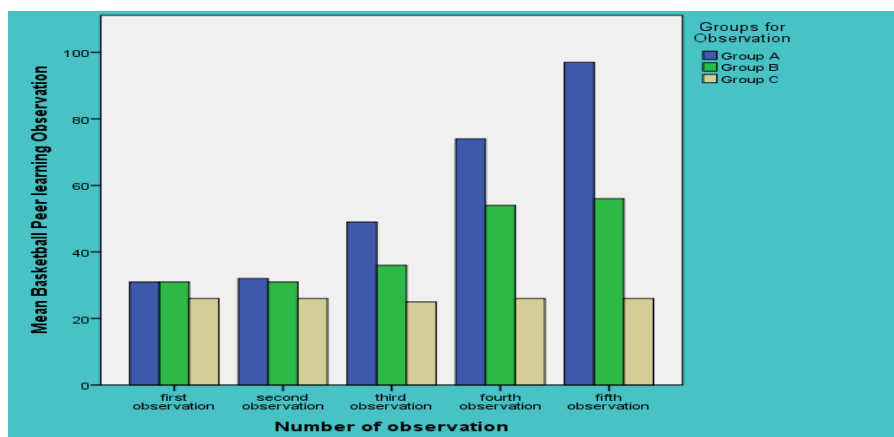


Fig 3.1: Basketball peer learning observation across the number of observation

The result obtained as displayed on fig.3.1 the mean of basketball peer learning observation among the groups with the continues or series of five different observations in different time across the groups, the researcher realized that there is difference in their learning approach in between each groups across the number of observation in basketball course that shows high progress across group A or experimental group and less utilization of peer learning in group B of specialized training group and group C of controlled group.

**Table 3.1:** Mean and Standard deviation of Johnson dribbling pre and post tests

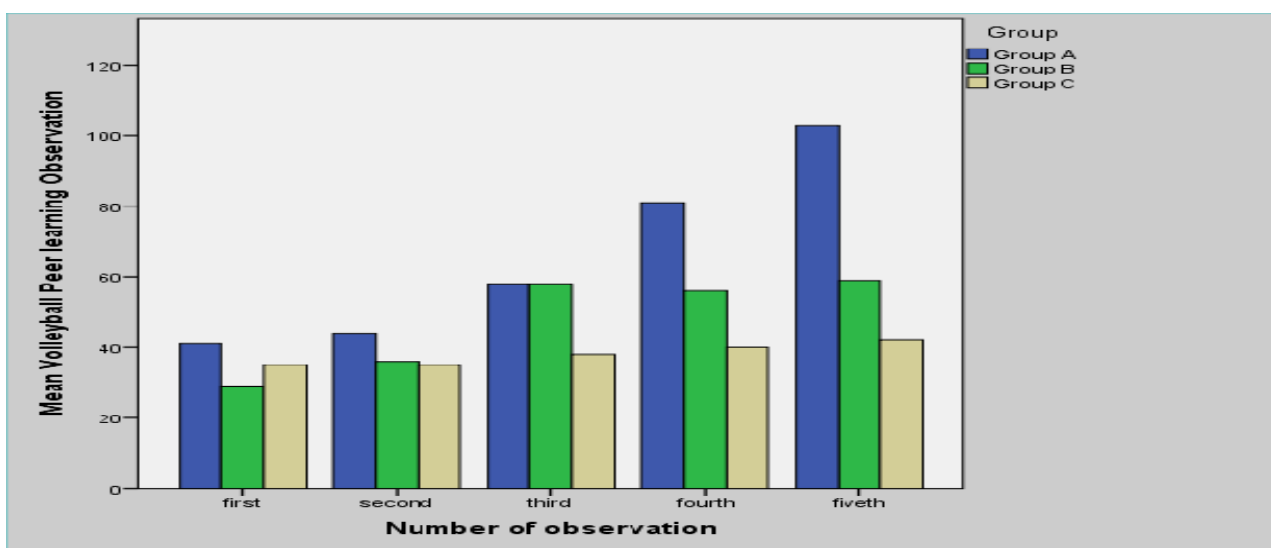
	Mean	N	Std. Deviation	Std. Error Mean
Johnson dribbling pre-test	30.27	30	5.570	1.017
Johnson dribbling post-test	33.23	30	5.406	.987

There is a mean difference in pre and post-test result of Johnson dribbling the basketball as shown on table 3.1, which is 30.27 and 33.23 of Johnson dribbling pre and post-tests respectively. And also, it shows that the Johnson dribbling post-test has the increment value of mean compared to pre-test value of students performance.

**Table 3.2:** Significance level of Pre and post- test of Johnson dribbling basketball

	N	Correlation	Sig.
Johnson dribbling pre-test & Johnson dribbling post-test	30	.851	.000

There is significant difference between Johnson dribbling basketball pre-test and post-test as shown on table 3.2 with the value of 0.00 which is less than normal 0.05 of significance difference level. This is due to the intervention used up in the study and the students who participated in peer learning show change on their dribbling basketball skill of performance.



**Fig 3.2:** Volleyball peer learning observation across the number of observation

Similarly, Fig. 3.2 reveals that the mean values of volleyball peer learning observation across the number of different time interval observation has difference in their experiencing this approach. As shown there is high value of peer learning on group A (experimental group), when compared to that of group B (specialized training group) and group C (controlled group).

**Table 3.3:** Mean and Standard deviation of volleying pre and post tests

	Mean	N	Std. Deviation	Std. Error Mean
Volleying Pre-test	31.57	30	8.455	1.544
Volleying post-test	37.10	30	8.113	1.481

It is understood that there is mean difference in pre and post test result of volleying the volleyball as shown on table 3.3, which is 31.57 and 37.10 of volleying pre and post-tests respectively. And also it shows that the volleying post-test has more value of mean compared to pre-test value of students' performance on volleying. The reason behind is the intervention that used under investigation of peer learning effect on the volleying skill brought change on their mean. The researcher realized that students who learned in peer have better development on volleying skill.

**Table 3.4:** Significance level of pre and post volleying test

	N	Correlation	Sig.
Volleying Pre-test & Volleying post-test	30	.832	.000

There is significant difference between volleying pre-test and post-test as shown on table 3.4 with the value of 0.00 which is less than 0.05 of significance difference level. This is due to the intervention used up in the study and the students who participated in peer learning show change on their volleying skill of performance.

**4. Conclusion**

The observation of peer learning approach in both Basketball and volleyball courses concluded that Group A has shown high progress compared to that of Group B and Group C. Pre and post-test of Johnson dribbling skill means were 30.27 and 33.23 respectively, and then their significant difference of 0.00; which is less than 0.05 level of significance. Whereas, pre and post-test of Volleying volleyball skill means were 31.57 and 37.57 respectively, with their significant difference of 0.00; which is less than 0.05 levels of significances. Peer learning approach as a matter of fact, many institutions of learning now promote instructional methods involving active learning that presents opportunities for students to formulate their own questions, discuss issues, explain their view points

and engage in cooperative learning by working in teams on problems and projects. That enhances learning skills in different games and develops the performance of students at individual and group level.

<sup>[12]</sup> According to individual learning style was preferred mostly found by positively to high achievers category, but peer learning style preference was negatively related to grade category. In the contrary, the peer learning preference was positively related to low achiever or performer which means low skill performer need supports, participations and group learning to improve their sport skill performance from the group members. As <sup>[13]</sup> gives specific examples of peer mentor support can include providing assistance in problem solving, opportunities for information sharing, motivation, encouragement, and realistic observation and feedback. Finally, reviewed that the effect of peer learning in educational setting according to peer learning has been shown to be highly effective in enhancing students' achievements and skill development in a range of educational setting.

### 5. Further Recommendation

There should be some effects of peer learning in the skill performance development if and only if that the students contribute with in a group for learning. Unless otherwise, it is recognized as self-centred learning that is too limited in its approach. Practically the effect is observable behaviour in peer learning situation.

And also stated that Collaborative group work presupposes that all group members are involved in and working on a common task in order to produce a joint outcome, in other words, working as a group is characterised by a common effort, utilisation of the group's competences, including problem-solving and reflection conjunctive group work.

The factors that must be considered in peer learning situation would be observed like students' readiness and learning belongingness. Thus <sup>[14]</sup> pointed out the peer learning allows students to feel a sense of belongingness due to team affiliation in sport skill practice that they want to improve as so that their team can improve.

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