



The Effect Of Progressive Activity Exercises On Developing Positive Thinking And Learning Some Basic Volleyball Skills

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Abstract

One of objectives of current research is to reveal effectiveness of multi-level exercises in developing motor thinking in two research groups, to determine effectiveness of these basic exercises in learning some skills with a multi-level ball, and to predict difference between The difference observed between both research groups regarding creativity performance across variables examined within the present study.

The present study adopted an experimental design to examine its procedures. The participants were second-year students enrolled in College of Education and Sports Sciences during academic year 2022–2023, They were selected by random drawing and then assigned to two equal groups: an experimental group and a control group, with 15 students in each group.

Each group completed eight instructional units, and each unit lasted 90 minutes. The experimental group carried out progressive activity exercises. whereas the control group was taught using the instructor's traditional approach throughout the duration of the study.

According to the findings, the researchers determined that both progressive activity exercises and teacher's selected instructional method contributed effectively to development of positive thinking and acquisition of several fundamental volleyball skills



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in both pre-test and post-test stages. In addition, results showed that experimental group achieved higher performance than control group in the post-test for both positive thinking and basic volleyball skill learning.

Keywords: Exercises, Practice Activities, Positive Thinking, Key Volleyball Skills.

1-1 Introduction

Both instructional and athletic fields are witnessing a clear evolution in modern teaching and learning methods. which aim to develop learners' physical, mental, and skill-based abilities holistically, focus is no longer limited to mastering motor skills alone, but has expanded to include instilling positive thinking patterns that contribute to improving learning process and enhancing athletic performance. Positive thinking is a crucial psychological factor that influences learners motivation, self - confidence, and ability to adapt to various educational situations, which directly impacts the acquisition of motor skills.

Progressive activity exercises are considered an effective teaching method in physical education, as they are organized from easy to difficult in a way that suits learners abilities and individual differences. This progression contributes to facilitating the learning process, fostering positive attitudes towards learning, and increasing effectiveness of learning basic skills in sports in general, and volleyball in particular". (Schmidt and Lee, 2019)

Volleyball is a team sport and important component of physical education curricula, playing a significant role in acquiring knowledge, motor skills, and social interaction, it encompasses a range of fundamental skills such as serving, receiving, passing, and spiking, therefore researchers decided to delve in to this area to determine the impact of progressively increasing activity levels on learners, specifically in fostering a positive attitude towards game and its contribution to acquiring the skills studied in this context.

1-2 Research Problem:



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The problem explored in this study is based on examining the connection between the mental dimensions of skill acquisition and the influence of cognitive processes on performance, with intention of advancing learning outcomes and elevating athletic achievement.

Positive thinking represents a significant psychological variable that may strengthen learners, motivation, build confidence in their abilities, and support their capacity to cope with learning demands while practicing motor skills through progressive exercises. This particularly important in team sports such as volleyball, where concentration, quick responses, and sound decision-making are essential in dynamic situations. for this reason, researchers chose to investigate this topic in light of the limited number of studies addressing it, in order to provide scholarly work that contributes to development of instructional environment.

Accordingly, the study seeks to answer the following central question: To what extent do progressive activity exercises contribute to enhancing positive thinking and improving the learning of basic volleyball skills?

Purposes of the Study: This research seeks to achieve the following objectives:

1. To examine the influence of progressive activity exercises and the teacher's instructional approach on the development of positive thinking among the two research groups.
2. To investigate the effect of progressive activity exercises and the teacher's instructional approach on acquiring some basic volleyball skills.
3. To identify the differences between the control and experimental groups in the post-test regarding positive thinking development.
4. To identify the differences between the control and experimental groups in the post-test regarding the learning of some basic volleyball skills.

1-4 Research Assumptions:

1. Statistically significant differences are expected to exist, between the pre-test and post-test mean scores of the control and experimental groups in the development of positive thinking skills among first-year students .



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2. Statistically significant differences are expected to exist, between the pre-test and post-test mean scores of the control and experimental groups in acquiring some basic volleyball skills among second-year students .
3. No statistically significant differences are expected to exist, between the post-test results of the two research groups in the development of positive thinking among second-year students .
4. No statistically significant differences are expected to exist, between the post-test results of the two research groups in learning some basic volleyball skills among second-year students.

1-5 Delimitations of the Study;

- humans scope; The study was limited to second- year students enrolled in College of Physical Education, Mosul University, during academic year 2022/2023.
- time Scope; The research was conducted over period from September 20/ 2022, to January 9/ 2023.
- location; The study was carried out in the indoor hall of College of Physical Education / Sports Sciences/ Mosul University.

1-6 Defining Terms:

1-6-1 Progressive Activities: Kojak et al. (2008) defined it as: "a strategy used when learners of varying cognitive or skill levels are studying the same concepts and learning to perform the same tasks. Regarding specific skills, this difference in level does not qualify them to acquire knowledge or perform the skill from a single starting point or at the same time allotted to everyone". (Kojak et al., 2008, p. 131)

1-6-2 Positive Thinking:

It was defined by (Abu Allam, 2003): "It is the highest form of mental activity in humans, and it is also a process by which the mind organizes its experiences in a new way as a solution to a specific problem or the perception of a new relationship between



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two or several things. Thus, it belongs to the highest levels of cognitive organization, which is the perception of relationships" (Abu Allam: 2003, 31).

2- Procedural Framework:

2-1 Methodology of Research: researchers used experimental method because it was suitable for nature of study problem.

2-2 Research Population and Sample: research sample was selected purposively and consisted of second-year students in College of Physical Education / Sports Sciences/ Mosul University, for (2022/2023) academic year.

sample comprised six classes. Through simple random selection, Gro. (A), consisting of 15 students; was chosen as control group, and Gro. (E), also consisting of 15 students, was chosen as experimental group.

Tab. (1) details the research sample and the methodology used

Division	My research groups	Independent variable	final sample size
A	Control group	teaching style	15
E	Experimental group	Gradual activity	15

2-3 Research Design

study adopted an experimental approach based on a randomly assigned equivalent- groups design, involving controlled measurements before and after intervention (Van Dalin, 1984, p. 384).

2-4 Homogeneity of Research Sample

To ensure comparability among the participants, sample was test for homogeneity across several variables, including age, stature, and body mass.

Tab. (2)



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Shows statistical parameters of results the measured factors (Growth variables)

Variables	$\bar{x}$	$S^{\pm}$	C.v
Age	245	16.32	6.66
Height	168	6.32	3.76
Mass	71	10.23	14.40

Tab. (2) indicates that the research sample did not exhibit any significant differences, which suggests that the sample was normally distributed and homogeneous.

2-5 Parity of the two research groups:

2-5-1-Equivalence in positive thinking:

The researcher examined the equivalence of positive thinking scale developed by Mohammed (2020), which includes (35) items and was adapted to the Iraqi context. The scale demonstrated validity, reliability, and objectivity, as presented in Tab. (3).

Tab. (3)

The table presents the statistical parameters of the pre-test for the two research groups in positive thinking

research group	$\bar{x}$	$S^{\pm}$	SIG
Experimental group	18.10	2.76	0.24
Control group	17.95	2.50	

The results presented in the table reveal that there were no statistically significant differences between the two research groups, based on the error rate value of (0.05), indicating equivalence at the pre-test stage.

2-5-2 -Equivalence in Basic Volleyball Skills:



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The researcher conducted an equivalence test in basic volleyball skills between the two research groups. This test served as a pre-test, as illustrated in tab. (4).

Tab. (4)

It shows statistical parameters of the pre-test for two research groups in (skill performance).

Skills	Experimental / group		Control / group		SIG
	$\bar{x}$	$S^{\pm}$	$\bar{x}$	$S^{\pm}$	
Tennis serving skills	4.06	0.25	4.33	0.89	0.28
Underhanded serving skills	5.40	0.50	5.33	0.48	0.72
The skill of passing from in front of the head to the front	4.73	0.54	4.93	0.59	0.33
Straight smashing skill	4.93	0.45	5.13	1.06	0.54

The data presented in the table indicate that the two research groups were statistically similar, since all skill measures exceeded the 0.05 significance level. This suggests that the groups were equivalent at the pre-test stage.

2-6 Control Group:

participants in control group carried out the assigned duties and activities in accordance with the prescribed curriculum, following instructional approach used by teacher, over an eight-week period, in a rate of two learning units each week.

Each instructional session lasted 90 minutes, during which subject teacher provided a detailed explanation of the required skill in the instructional segment of main phase of lesson.

2-7 Experimental Group - Progressive Activity Exercises:



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The second experimental group in the study sample completed the assigned duties and activities through the progressive activity exercises over an eight-week intervention, delivered at a frequency of two instructional sessions per week.

Each session lasted 90 minutes. To verify the suitability of these instructional plans, the researcher submitted them to a panel of specialists in motor learning, curriculum design, and the subject teacher in order to obtain their informed feedback regarding their appropriateness.

2-8 Main Experiment: The instructional sessions for two research groups commenced on Tuesday, December 20, 2022, at a rate of two sessions per week, held on Sunday of each week. The plans prepared for each group were carried out by the subject teacher as part of learning artistic performance. Regarding a set of basic volleyball skills, and in accordance with the syllabus assigned to the two research groups in the indoor hall at the College of Basic Education/ University of Mosul, the overall number of instructional units was 16 for two groups, with 16 units allocated to each group, and each instructional unit lasted 90 minutes.

2-9 Final Post-Tests:

2-9-1 The Positive Thinking Special Test:

This test was conducted on Sunday, March 12/ 2023, at 8:30 AM to both research groups under same testing procedures used in pre - assessment stage and within scheduled time. Test was carried out in the lecture rooms of College of Physical Education.

2-9-2 Post-test for assessing skill performance:

This test was carried out on Sunday, March 12/ 2023, at 9:30 AM to both research groups, under conditions and procedures similar to those used in pre-tests and within the designated time. test was conducted in indoor hall for team games at College of Physical Education, Mosul University .

2-10 Statistical Methods: data obtained by researcher was statistically processed through = data analysis package (SPSS).

3- Presentation, analysis, and discussion of the findings:



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3-1 Presenting and analyzing the results:

3-1-1 Presentation of the first hypothesis results: The findings showed statistically significant differences between the pre-test and the post-test in both the control and experimental groups in the development of positive thinking among second-year students.

Tab. (5)

findings revealed a variation in control group's scores on positive thinking between pre - test and post - test

Testing	$\bar{x}$	$S^{\pm}$	SIG
Pre-test	17.95	2.50	0.0001
Post-test	22.53	1.50	

table above indicates that control group demonstrated a significant improvement from pre-test to post-test, with post-test results exceeding pre - test results. This is confirmed by error value of 0.0001, which is lower than significance level of 0.05.

Researchers attribute the enhancement of positive thinking among control group participants to instructional units designed by course instructor, which helped broaden and deepen their cognitive comprehension of skill being taught..

Tab. (6)

shows Pre- and Post-Test Differences in Positive Thinking for Experimental Group

Testing	$\bar{x}$	$S^{\pm}$	Sig
Pre-test	18.10	2.76	0.0001
Post-test	28.60	2.35	



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The results presented in table reveal a statistically significant difference between pre-test and post-test scores of the experimental group, with post-test in favor of the experimental condition, since the p-value reached 0.0001, which is below the 0.05 threshold.

3-1-2 The second hypothesis was examined by comparing the pre-test and post-test results of both the control and experimental groups in relation to learning several fundamental volleyball skills among second-year students

Table (7)

Table illustrates arithmetic means, standard deviations, and calculated t-value obtained from comparing pre - test and post - test measurements of control group in learning a set of basic skills

Skills	Pre-test		Post-test		SIG
	$\bar{x}$	S $\pm$	$\bar{x}$	S $\pm$	
Tennis serving skills	4.33	0.89	5.80	0.67	0.000
Underhanded serving skills	5.33	0.48	6.06	0.96	0.001
The skill of passing from in front of the head to the front	4.93	0.59	5.80	1.01	0.001
Straight smashing skill	5.13	1.06	6.00	1.19	0.003

Table above indicates that comparison between pre - test and post - test scores revealed significant differences, with post-test results showing a clear advantage. Corresponding p-values were 0.000; 0.001; 0.001; 0.003, respectively, all of which are below significance level of 0.05.

Table (8)

Table shows means, standard deviations, and calculated t-values for pre - test and post - test scores of experimental group in learning a number of basic skills.



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Skills	Pre-test		Post-test		SIG
	$\bar{x}$	S $\pm$	$\bar{x}$	S $\pm$	
Tennis serving skills	4.03	0.25	6.86	0.74	0.001
Underhanded serving skills	5.40	0.50	7.53	0.74	0.000
The skill of passing from in front of the head to the front	4.73	0.54	7.60	0.73	0.002
Straight smashing skill	4.93	0.45	6.93	0.96	0.000

The table above indicates that the post-test results were significantly higher than the pre-test results, demonstrating statistically meaningful improvements in favor of the post-test

3-1-3 Results pertaining to the third hypothesis indicate that the post-test scores of the two research groups did not differ significantly in terms of positive thinking development among second-year students.

Tab. (9)

The table presents the mean scores, standard deviations, and computed t-value for the two research groups in the post-test measure of positive thinking development

Groups	$\bar{x}$	S $\pm$	SIG
Experimental group	28.60	2.35	0.001
Control group	22.53	1.50	

The data presented in the table indicate statistically significant differences in the positive thinking test in favor of the experimental group, as the significance level reached (0.01), which is lower than the adopted significance level (0.05).

According to researchers, this development can be attributed to the high level of intellectual and cognitive maturity among the study sample, as a stronger level of positive



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thinking contributes to enhancing the relationship between cognitive learning and skill-based learning.

This is what Mainl emphasized: "The learner at this stage develops the ability to receive and assimilate information. This development in information assimilation manifests itself in a precise and improved sensory-motor manner, as well as in the comprehension of a greater amount of information presented, the understanding of explanations and corrections resulting from the method of explanation, and finally, in a clear and consistent visualization of movement." (Mainl, 1987, p. 19)

3-1-4 Results of the fourth hypothesis: The findings indicated that there were no significant differences between the post-test scores of the two groups regarding the learning of some basic volleyball skills among second-year students.

Tab. (10)

It displays the arithmetic means, standard deviations, and calculated t-test value for both research groups in the post-test of several basic skills

Skills	Experimental group		Control group		SIG
	$\bar{x}$	$S^{\pm}$	$\bar{x}$	$S^{\pm}$	
Tennis serving skills	6.86	0.74	5.80	0.67	0.001
Underhanded serving skills	7.53	0.74	6.06	0.96	0.002
The skill of passing from in front of the head to the front	7.60	0.73	5.80	1.01	0.001
Straight smashing skill	6.93	0.96	6.00	1.19	0.02

The table above reveals statistically significant differences in some volleyball skill tests, with the results favoring the experimental group, as the p-values (0.001), (0.002), (0.001), and (0.02) were all below the 0.05 significance threshold.



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The researchers attribute the superiority of the experimental group over the control group to the development of their thinking skills and their knowledge of the components of the skill. This is one of the reasons for their superiority. Abdulaziz (2014) states that "developing thinking skills within educational units helped students increase their ability to perform the task." They learned motor skills better than the control group, which learned using the departmental method. Learning basic skills, in particular, had a positive impact on modifying their motor behavior, and their performance was characterized by diversity and multiplicity due to the simultaneous interaction of several elements. This requires developing and using thinking when learning those skills in order to help the student recall the appropriate task and how to perform it, which leads to successful performance of those skills. (Abdulaziz, 2014, 4)

The researchers believe that relying on these exercises in teaching provided students with learning opportunities, enhanced their positive thinking skills, and gave them the chance to investigate facts and apply learning processes and skills. Furthermore, the comprehensive educational package they prepared for the experimental group, based on progressively challenging activity exercises, significantly contributed to increasing the amount of learning in certain volleyball skills, demonstrating its suitability. The use of variety in the practical exercises also contributed to its effectiveness.

4- Conclusions:

- The results revealed that both groups made notable gains in strengthening positive thinking and improving selected volleyball skills.
- The experimental group obtained superior scores in the post-measurement of positive thinking.
- The experimental group obtained superior scores in the post-measurement of selected volleyball skills.

Sources.



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