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## Effect of using command and cooperative methods in teaching handball skills to preparatory school students in Thi Qar governorate 2023-2024

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### Abstract

Many countries around world have moved towards developing their educational systems with teach methods and approaches of educational better systems followed highly achieve effective useful teaching available educational studying according perspective of educational style technology, which led work to develop educational paths as alternatives that are compatible with learning these games according level, capabilities potentials of final learners outcome. importance research lay in knowing per effectiveness of multiple using many types of success teaching methods in physical education for study purpose of wished developing learning best process in handball. researcher by methodology used experimental method with separated two equivalent different groups, because it is suitable for nature of this study and its objectives. research community consisted of middle school students, consisting of fourth, fifth and sixth grade students, in both scientific and literary sections, for academic year 2023-2024, totaling 267 Student, and research sample was represented by fourth-grade literary students distributed into two classes, and selection was done intentionally, where class (A) implemented command method and class (B) implemented cooperative method. researcher conducted field experiment on a sample of 64 students representing two sections, with a total of 32 A student from each class. Results showed that both command and cooperative methods had a positive impact on learning some basic handball skills. Cooperative method showed superiority over command method to current and previous learning all basic handball farther skills under study catching ball, passing, and receiving ball. researcher recommends necessity of using command and cooperative methods to high best learning process, and necessity of using cooperative method in learning some basic handball skills.

**Keywords:** Teaching methods, American style, interchange style, handball skills, preparatory study

### Introduction

Physical education is an important filed in process of wide education goals, individual physically, skillfully and highly emotionally according to learn inclinations and emotions. many countries recently around world moved fast toward develop educational be systems and review curricula from time and high ways of best why when for low teaching be methodology and techniques of best light of educational good systems followed many of effective teaching and available educational mean according to perspective of educational technology. This has led those working in field of physical education and teaching to work seriously to develop treatments according to educational path as new alternatives that are compatible with learning those games, skills and activities according to level, capabilities and potential of learners. Therefore, many different educational methods have emerged, which provided opportunity to choose appropriate method for nature, circumstances and environment of learners to be able to achieve its educational goals and work to develop capabilities of learners and enhance them. Therefore, there no single educational wish method, as in be each method has it special for own goal, application and content. Therefore, it necessary back work by different methods so know of many effect low of which one in rich get a more high distinguished be result than of others.

Handball is a team game with that is a characterized precision, speed, excitement, organized performance. Therefore, process of wished learning some of good skills of beyond game cannot be well achieved in many desired manner except high use of multiple wish methods to of deliver material a learner.

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Importance of research is knowing to answer questions by effectiveness best of using wish various want types of direct home teaching methods run in physical education send for purpose of came developing learning back process of bring handball new best skills. Despite multiplicity of physical education teaching methods and its different approaches to teaching games, activities wish motor play skills, remains for best optimal back educational home method that shall of suits this best activity skill extent of its high student harmony with learners' abilities and capabilities help of available educational means is one of basic and necessary matters that contribute to educational process. It works to economize effort and time investment to speed up educational process. As for research problem, despite multiplicity of different teaching methods, research is ongoing on various methods. Through practical lessons, researcher found that some subject teachers focus on one method, which is explaining skill and implementing a model, then applying it by students without giving any role to student.

research want identify effectiveness us teaching methods (immediate - cooperative) in teaching some handball skills.

**Research Methodology:** Nature any study problem for is

should be basis upon which get method is highly chose. Therefore, researcher used with of experimental method any of two equivalent groups because it is suitable for nature of this study and its objectives. research community consisted of middle school students, consisting of fourth, fifth and sixth grade students, in both scientific and literary sections, for academic year 2023-2024, totaling 267. Student, and research sample was represented by fourth-grade literary students distributed into two classes, and selection was done intentionally, where class (A) implemented command method and class (B) implemented cooperative method. researcher conducted his field experiment on a sample of 64 students representing two sections, with a total of 32 A student from each department. researcher conducted homogeneity in order to reduce differences to minimum limits among sample members. researcher conducted homogeneity process for research sample members in variables of age, height, and weight. homogeneity process was also conducted in skills that were chosen as study variables and were represented by holding ball, passing, receiving ball. researcher used skewness coefficient law to achieve homogeneity among sample members, as shown in Table 1.

**Table 1:** Shows homogeneity variables among sample members.

Variables	Measurement unit	Mean	standard deviation	Mediator	Coefficient of skewness
Age	month	160.5	3.76	160	0.39
Height	cm.	151.93	4.68	151.5	0.27
Mass	Kg.	46.03	5.27	45.5	0.3
Holding ball	degree	25.25	6.33	23	1.06
Passing	degree	5.12	3.09	6	0.84-
Ball control	degree	2.06	1.45	2	0.12

\* All values of skewness coefficient ( $\pm 3$ ) indicate homo data of member of better sample in variables

Researcher conducted equivalence between separated in research groups for highly determined project pointed with

author by using t-test for highly independent recommended sample in study skills variabling, Table 2 shows.

**Table 2:** Shows equivalence of research groups in study variables.

Variables	Measurement unit	First group		Second group		(t) value		Sig.
		Mean	St.d	Mean	St.d	calculated	Tabular	
Age	month	160.68	3.80	160.31	3.72	0.27	2.04	Insig.
Height	cm.	151.25	3.73	152.62	5.38	0.81		Insig.
Mass	Kg.	45.87	5.02	46.18	5.5	0.61		Insig.
Holding ball	degree	27,18	6.80	23,31	5.15	1.75		Insig.
Passing	degree	5.75	3.09	4.5	2.97	1,13		Insig.
Ball control	degree	2	1.41	2.12	1.49	0.28		Insig.

Table value of (t) at a degree of freedom of (30) and a significance level of (0.05) is not high (2.04). observing calculated number of value in (t) valuing for many are variabling, find that they coming back near or close are less than table value of (t) of (2.04) degree for best freedom of (30) a significance level of (0.05), which indicates absence of significant differences. This means that two groups are equivalent in research variables.

**Research Skills:** Some basic handball skills have been identified according to handball curriculum for preparatory

student who studying in stage in continuous academic study of year 2023-2024. Which was represented B. Holding ball, passing, receiving ball. After that, researcher highly prepared a paper in of questioning of form why determine back appropriate test be both of total of deed handball to in skills under study, with 3 tests for each skill, Appendix (1). questionnaire was presented to a group of experts and specialists in field of handball and physical education sciences at University of Thi Qar. After emptying questionnaires and extracting percentages, tests that received most repetition were selected, and Table (3) shows that:

**Table 3:** Expert selection percentages for handball skill tests

Skill	Test	Percentage
hold and receiving ball	Measuring accuracy in stopping ball and regaining control of it with hand	83%
	Receiving rebounded ball	80%
Passing	Rebound passing on a wall for a distance of (8 m) for 30 seconds	79%
	passing ball towards a small goal (15 m)	75%
	passing ball around a drawn circle	85%
Scoring	Shooting from in front of goal towards target, and a certain score is calculated for each place.	90%
	Shooting from side of goal towards target	87%

### Research Tests

First test: Stopping ball (receiving ball)

- **Test objective:** To measure accuracy ball and regaining control of it with hand.
- **Tools:** 5 handballs, measuring tape, paints.
- **Procedures:** Test area is stopped behind line and planned, player strongly stands in behind test line area, coach should stands of a ball on front (A) after giver start of start test, throws ball playing handball player who advances from starting line to inside, returning to start starts again, ball must be within designated area, with one of his feet inside area, test area trying to stop ball if coach makes a mistake in throwing ball, attempt is repeated and does not count.
- **Registration:** (2) marks are given for each correct attempt. (10) marks are given for all correct attempts.

Second test: Passing ball towards three circles drawn on ground

- **Test objective:** To measure accuracy of intermediate passes.
- **Tools:** Specific testing area, handball, measuring tape, dyes.
- **Procedures:** Draw three overlapping circles, their diameters respectively (2 m, 4 m, 6 m) give them points respect (6, 4, 2) center back circles is of distance among be start and three circles, which is a distance of (20 m). player stands behind starting line and then passes ball with either hand trying to drop it into small circle. Scoring: player is given (5) attempts.
- **Scoring:** number of points player gets in five attempts is calculated. If ball falls on lines of circles, following points are given, according to sequence of circles (5, 3, 1) point. attempt is considered a failure if ball falls outside circles.

Third test: Aiming power:

- **Purpose of test:** To test throwing power, shooting accuracy, and ability to exert appropriate effort.
- **Equipment used:** Five handballs and a handball court.
- **How it is performed:** Men shoot at goal from a distance

of 10 meters, with each athlete shooting five balls. A goal is scored when ball enters goal directly into net without touching ground.

- **Scoring:** An athlete receives one point for each direct hit on goal.

### Scientific basis for tests

To ensure accurate measurement, researcher must verify scientific coefficients of tests before conducting main experiment. To this end, researcher found coefficients of validity, reliability, and objectivity for nominated tests, which are as follows:

#### First: Test validity

A test is valid when it measures purpose for which it was designed. researcher extracted validity coefficient through content validity by presenting a form select be in appropriate test for of handball skills under study to a group of experienced and specialized handball practitioners.

#### Second: Test reliability

Test reliability refers to test that gives similar or similar results high to it return in applied back in than once under soon conditions. found reliability in to back coefficient nominated skill tests in on sample members of exploratory experiment, numbering (6) students, who are fourth-grade science students, on 10/22/2023. Then test was repeated after 7 days on 10/29/2023. reliability coefficients were compared with tabular (r) value of (0.576) a degree of freedom of (10) in below a significance to in level of (0.05), which indicates reliability of tests used in research.

#### Third: Objectivity of test

Objectivity in back to of test is defined as lack of influence of test results on subjectivity or personality of examiner, and that examinee obtains a certain score when test is corrected by more than one examiner. researcher found for each of basic handball tests by finding simple coefficient (Pearson). among results of two arbiters in back and second test conducted pilot experiment, it was shown that there is a high correlation coefficient and table 4.

**Table 4:** Stability and objectivity transactions

No.	Test name	Stability coefficient	Objectivity factor
1	Catch and receive ball	0.87	0.87
2	Passing ball towards three circles drawn on wall	0.90	0.85
3	Scoring	0.89	0.85

### Exploratory experiment

Conducted a survey experiment on 10/22/2023 on a group of students who were outside research sample and from original community, and they were 6 students. researcher and subject teacher supervised that experiment, and goal of this survey experiment was to know work obstacles that might hinder work of field experiment. Survey conditions under which

tests are conducted and suitability of location for their implementation. Ensure validity of tools used in test. support team's knowledge of nature of work.

**Pre-tests:** Pre-tests were conducted on Sunday 11/5/2023 at handball field. In Al-Bathaa Secondary School for Boys, with presence of support team.

### Educational curriculum

Researcher adopted educational skills curriculum prepared by subject teacher according to vocabulary of handball curriculum, noting that number of educational units is 12 educational units distributed over three skills: holding ball, passing, and receiving ball, at a rate of two educational units per week for each section, and unit time educational 45 minutes are divided as follows:

- a) **Preparatory Section:** (12 minutes) Recording absences, warm-up, and organizing work.
- b) **Main section:** (25 minutes) includes educational part, in which skill being taught is explained, as well as exercises that will be applied, as well as practical part, in which exercises specific to skill to be taught are applied.
- c) **Final section:** (8 minutes) includes light jogging, a small recreational game, and then departure.

### Post-tests

After completing training units, post-skill tests were conducted on 1/2/2024 under same conditions as pre-tests and with same support team.

### Statistical methods

1. Mean
2. Standard deviation
3. Mediator
4. Independent Samples T-Tests
5. Coefficient of skewness
6. Simple correlation coefficient (Pearson)

### Results

Displaying results of pre- and post-tests for American style group in some basic handball skills

**Table 5:** Significance of differences between pre- and post-tests for American style group

Variables	Pre-tests		Post-tests		F	F2	Calculated T value	Sig.
	Mean	St.d	Mean	St.d				
Holding ball	27.81	3.43	29.12	7.44	20.50	4.54	7.09	Sig.
Passing	5.75	1.17	7.55	3.19	13.18	2.85	6.82	Sig.
Receiving ball	2	1.75	4	1.46	3.68	1.68	15.4	Sig.

Tabular (t) value at significance level (0.05) in back degree so freedom (15) is (2.13). Table (5) high means, standard deviations in calculated best (t) value in pre-test post-skill tests for some basic handball skills for first group (commander). results showed that arithmetic mean for first group in pre-test in ball-holding skill was (27.81) a standard in deviation of (44.7), and arithmetic mean for post-test in ball-holding skill was (20.50) with a standard deviation of (4.54). calculate to (t) value reached (0.97), is greater than tabular (t) in value of (13.2) with a degree of freedom of (15) and below a significance level of (0.05). This indicates presence of a significant difference in favor of post-test.

results also showed that arithmetic mean of first group in pre-test in passing skill was (75.5) with a standard deviation of

(19.3) and arithmetic mean of post-test in passing skill was (8.13) with a standard deviation of (85.2). calculated (t) value was (82.6), which is greater than tabular (t) value of (13.2) with a degree of freedom of (15) and below significance level of (0.05). This indicates presence of a significant difference in favor of post-test.

Results also (46.1) and calculated (t) value was (7), arithmetic mean of post-test in extinguishing skill was (68.3) with a standard deviation of (53.1). is greater tabul (t) in value (13.2) showed arithmetic mean of first group in pre-test in ball reception skill was (2) with a standard deviation with a degree of freedom of (15) and below low level (0.05). This indicating to presence a difference by high favor in post-test.

**Table 6:** Significance of differences between pre- and post-tests of cooperative group

Variables	Pre-tests		Post-tests		F	F2	Calculated T value	Sig.
	Mean	St.d	Mean	St.d				
Holding ball	25.3	5.32	31.11	2.15	15	8.18	7.09	Sig.
Passing	4.5	3.07	7.72	4.22	17.18	2.68	6.82	Sig.
Receiving ball	2.25	1.16	5	1.61	5.37	39.64	15.4	Sig.

Tabular (t) value is (2.13). results showed that arithmetic mean Table (6) shows means, standard in deviations by calculated (t) value in pre-test post-skill tests some basic handball skills and for second group (cooperative). for second group in pre-test in ball-holding skill was at significance level (0.05) and degree of freedom (15) (31.23) a standard deviation of (32.5) and arithmetic mean for post-test in ball-holding was (15) with a standard deviation of (2). (t) value in reached (6.81), is greater tabular (t) in value (13.2) with a degree of freedom of (15) and below level (0.05). This indicates presence of a significant difference in to favor by of post-test.

Results also mean of post-test in passing skill was (18.17) showed that arithmetic mean of second group for post-test in passing skill was (5.4) with a standard deviation of (0.73),

and which indicates presence of a significant difference arithmetic a standard deviation of (52.3), calculated (t) value in was (57.14). It is than tabular (t) of (13.2) with a degree of freedom of (15) and below significance level of (0.05), in favor of post-test. results also showed that arithmetic mean of second group in pre-test in tapping skill was (25.2) with a standard indeviation of (161), and arithmetic mean of post-test in (t) value of (13.2) with a degree of freedom by (15) in to below level of (0.05), why indicates presence of a significant difference in favor of post-test. tapping skill was (37.5) with a standard deviation of (170). As for calculated (t) value, in reached (42.8).

### Displaying results of post-tests for two groups



**Table 7:** Significance of differences between post-tests of two groups

Variables	Command Group		Cooperative group		T value		Sig.
	Mean	St.d	Mean	St.d	Calculated	Tabular	
Holding ball	20.5	4.54	15	2	3.69	2.04	Sig.
Passing	13.18	2.85	17.18	3.52	2.48		Sig.
Receiving ball	3.68	1.53	5.37	1.7	2.48		Sig.

Tabular (t) value at a significance level of (0.05) results showed that arithmetic mean of first group (command) in post-test in ball-holding skill was (20.5) with a standard deviation of (54.4) and a degree of freedom of (30) is (2.04). Table (7) Tabular (t) value at a significance of (0.05) shows mean, standard in deviations high calculated (t) value post-skill for some basic handball skills for first (command) and second (cooperative) groups. while arithmetic mean of second group (cooperative) in post-test in ball-holding skill was (15) with a standard deviation of (2). (t) value be why reached (69.3). in greater than tabular (t) value in (0.42) with a degree of freedom of (30) and below a significance of (0.50). indicates presence of a significant difference in favor of second group (cooperative).

Results also showed that arithmetic mean of first group (command) in post-test in passing skill was (18.13) by a standard in deviation of (85.2), while arithmetic mean of second group (cooperative) in post-test in passing skill was (18.17) with a standard deviation of (52.3). calculated (t) value was (94.2), is greater in to be tabular (t) of (04.2) with a degree of freedom of (30) and below a significance level of (05.0). This indicates presence of a significant difference in favor of second group (cooperative). results also showed that arithmetic mean of first group (command) in post-test in patting skill was (3.68) high a standard deviation of (53.1), while be mean of second group (cooperative) in post-test in patting skill was (5.37) with a standard deviation of (7.1).

### Discussion

From results in Tables (6.5), find there is a clear and tangible difference among individuals of two groups in post-skill tests, and this is consistent with was stated to in first how why hypothesis of study. researcher why best attributes reason for to soundness of educational curriculum and its inclusion of exercises selected scientifically and correct, consistent repetitions why are consistent with level and ability of sample individuals, and are based on correct practice. This is what Qasim Lazam (2005) confirmed, that train in to and practice back to a skill within a task leading experience and development in practice is important variable in learn process for complex and simple skills.

Calculated in value be (t) was (48.2), is greater more tabular value (t) of (04.2), with a degree when freedom of (30) and below significance level of (05.0). This indicates presence of a significant back to difference in favor to in second group (cooperative). Through results back soon in Table (7), we find that calculated value of (t) for all skill tests under study is its tabular value, which indicates significance of differences between post-tests of two groups, in favor of second group (cooperative). researcher more see reason for superiority of second group, which used cooperative method, to fact that student in this method has a good opportunity to correct his motor performance errors early by receiving feedback from his fellow observer. Feedback is information related to performance or performance result, and it is information related to form and style of performance movements, and it is specific and clear. Also, one of reasons that led to superiority of cooperative method is nature of this method, which imposed presence of one observer as a teacher

for each performing student to help him get rid of errors. Which he commits while performing skill, and this is what Adel Awda (2001) confirmed, that observing student creates a mental image of motor skill when correcting mistakes of his fellow performer, and this is what develops his intellectual side.

Basman Abdul Wahab (2002) also confirms superiority of cooperative method, as reason for this is that student in command method waits for implementation of orders after teacher's instructions, and then begins motor performance, while student is in continuous work in cooperative method, whether he is performing motor duty or assisting or directing his colleague.

### Conclusion

In light of research results, researcher concluded that command and cooperative methods a positive highly best impact to learning many some basic handball skills. Cooperative method showed superiority over command methodology in learning all basic handball skills under study: catching ball, passing, and receiving ball.

### Recommendations

Based on research results, researcher recommends use of both command and cooperative learning methods. Cooperative method should be used to learn some basic handball skills. Similar studies should also be conducted on age groups not covered in this study. Further studies are needed to determine impact of using other teaching methods and other basic skills for different sporting activities.

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## Appendices

### Appendix (1) Samples of educational units

#### Unit No. (1)

Educational objective	Teaching skill of holding and receiving ball		
Educational objective	Developing spirit of perseverance		
Tools used	Handball court, handballs, wall, chalk		
Department	time	Activities and motor skills	Formations
Preparatory Section General Warm-up Special warm-up	12 7 5	Preparing circulatory and respiratory systems, muscle and nervous groups, and joints with specialized physical exercises, movement, transition, extension, flexibility, etc.	xxxxxxx xxxxxxx O
Main Section Educational activity	25 10	Explaining skill of holding and receiving ball in terms of types of passes and how to position fingers and hand when holding and receiving ball and applying it to students and common mistakes that occur while holding and receiving ball	x O x x x xxxxxxx
Practical activity	15	Divide students into equal groups and perform passing and receiving of ball from a colleague, and type of passing is changed.	xxx xxx xxx xxx xxx xxx
Final section	8	1- A small recreational game related to handball. 2- Educational Guidelines - Nutrition Review 3- Departure	xxxxxxx O

#### Unit No. (2)

Educational objective	Teaching passing skills		
Educational objective	Develop self-confidence		
Tools used	Handball court, handballs, wall, chalk		
Department	time	Activities and motor skills	Formations
Preparatory Section General Warm-up Special warm-up	12 7 5	Preparing circulatory and respiratory systems, muscle and nervous groups, and joints with specialized physical exercises, movement, transition, extension, flexibility, etc.	xxxxxxx xxxxxxx O
Main Section Educational activity	25 10	Explaining to students skill of tapping, as tapping is an offensive method used by team to reach opponent's goal. There are types of tapping, and knowledge of common mistakes and violations that occur during tapping.	x O x x x xxxxxxx
Practical activity	15	Divide into groups according to equality, and student performs tapping, reaches end of marker, and hands ball to his colleague. tapping is changed in its various types, and mistakes that occur during performance are corrected.	xxx xxx xxx xxx xxx xxx
Final section	8	1- A small recreational game related to handball. 2- Educational guidelines - Nutrition review 3- Departure	xxxxxxx O

#### Unit No. (1)

Educational objective	Teaching shooting skills		
Educational objective	Develop self-confidence		
Tools used	Handball court, handballs, wall, chalk		
Department	time	Activities and motor skills	Formations
Preparatory Section General Warm-up Special warm-up	12 7 5	Preparing circulatory and respiratory systems, muscle and nervous groups, and joints with specialized physical exercises, movement, transition, extension, flexibility, etc.	xxxxxxx xxxxxxx O
Main Section Educational activity	25 10	Explaining skill of shooting, how to position body when shooting, how to look at goal, and shooting from a jump and then from a standing position.	x O x x x xxxxxxx
Practical activity	15	students are divided into two groups and are asked to aim at target and correct common mistakes they make.	x x x x x x
Final section	8	1- A small recreational game related to handball. 2- Educational guidelines - Nutrition review 3- Departure	xxxxxxx O