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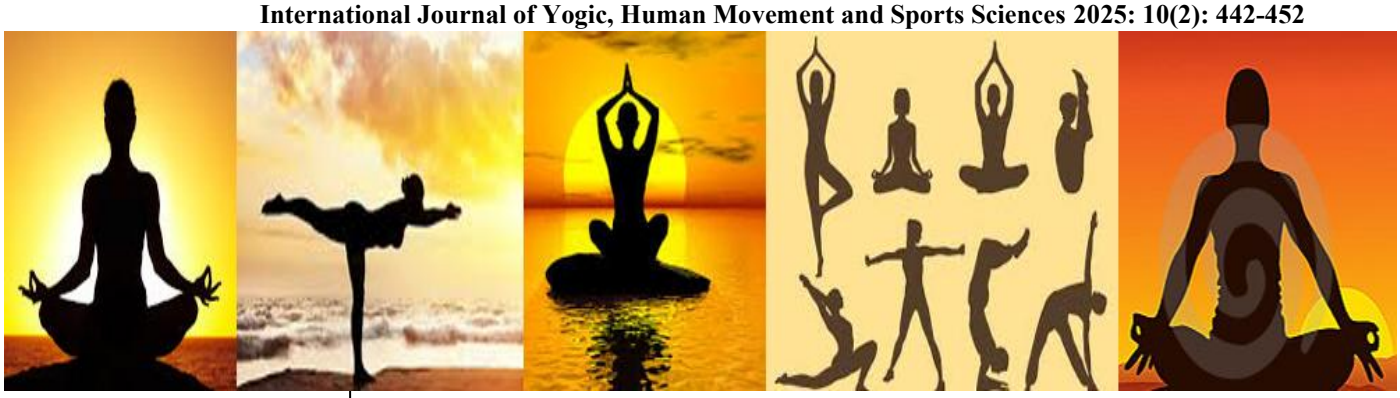

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Impact of educational methods to develop football skills and raising level of psychological flow for female students in colleges of physical education

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Abstract
The current study aims to develop and standardize a psychological flow scale for first-year female students in College of Physical Education and Sports Sciences, University of Maysan, in subject of football. It also aims to identify impact of self-application and multi-level application methods on developing football skills and raising level of psychological flow for first-year female students in College of Physical Education and Sports Sciences, University of Maysan, in subject of football. researcher used descriptive approach with survey method to measure psychological flow. She also used experimental approach with equivalent groups method to develop football skills. research community was represented by students of College of Physical Education and Sports Sciences at University of Maysan, numbering (304) students for academic year (2023-2024), distributed into (6) classes. Classes (A, B, C) were chosen randomly and by lottery. Class (A) represented control group, while Class (B) represented first experimental group. Class (C) represented second experimental group. Thus, number of students in three classes was (171) students. (50) students were chosen randomly. Thus, percentage of sample was (16.44%), which is an appropriate percentage to represent research community in a true and honest manner. research results showed that sequence of best group in psychological flow scale and football skills was first group that used multi-method, followed by second group that used self-application method, then third control group. researcher concluded that three multi-level methods, self-application and follow-up, achieved their goals in developing skills of handling and scoring in football, in varying proportions, and that (multi-level) method was best method in developing skills of handling and scoring in football, followed by self-application method, and that (multi-level and self-application) method achieved raising level of psychological flow of female students through contents of these methods.

Keywords: Psychological flow, basic skills, football, educational units

Introduction
In twenty-first century, world has witnessed development in all areas of educational process, and physical education is one of these areas. truth of its impact on body has been attributed through various sciences, whether in terms of physical, skill, health, or psychology, in order to reach a high level of performance so that learner can reach or obtain best results and generate interests in him to push him to make more efforts, and make him able to study and judge his results. In order to ensure that physical education achieves its general and specific goals in desired manner, teaching methods and approaches must be chosen on a sound basis, and optimal investment must be made in content of material to be taught to crystallize fruitful goals, and then translate them into educational situations that are easy to achieve and evaluate. On this basis, it has become necessary to pay attention to physical education lesson, which constitutes practical application to achieve educational and pedagogical goals, according to scientific foundations. Football is one of exciting and beloved team games for young and old. It has received great attention due to its wide popularity if we compare it with other sports because of excitement, skill and speed it carries, which made those concerned call it game of multiple talents, which requires a high acquisition of skill and motor abilities. This is what prompted many researchers and those with experience and specialization to conduct research

and studies to find best modern methods and techniques that facilitate process of students acquiring skill, motor and physical abilities, as well as developing various aspects of personality. It is well known that football is one of games that consists of a large number of basic skills that teacher is required to teach, convey to student, and develop well in order to raise his skill performance. This is done by using appropriate and suitable method that agrees or is consistent with nature, tendencies, and desires of students, and brings them to a level of mastery and a high level of efficiency and effectiveness in order to achieve desired goals. Scientific research has indicated that learning process takes place through organizing or directing educational experiences of learners by teacher in a way that leads to development of their potential and abilities, in addition to taking into account individual differences. This, in turn, requires attention to cognitive knowledge that individual possesses, his ability to control his intellectual feelings, and his mental integration so that he has positive emotional flows through which he can control his mind and master development of skills. Accordingly, teacher's knowledge of cognitive methods that distinguish learners helps in identifying their personal characteristics and tendencies, in addition to determining how they deal with information and confront them to solve problems. Through above, importance of research becomes clear by using methods that are more Development and impact are two methods of self-application and multi-level application that accompany type of activity related to football skills and prove their effectiveness and extent of impact of each one of them in educational process through optimal investment of effort and time, in addition to extent of their contribution to enriching teacher with practical method through which he can make educational process successful and keep pace with scientific development of this game. It is known that football subject is one of subjects included in physical education curriculum, which requires subject teacher to convey it to learner and what accompanies it of excitement and development of psychological flow, and since method of self-application and multi-level is also close and related to psychological flow, according to researcher's opinion, therefore researcher sees fit to study these methods because they are more developed and accompany type of activity specific to two skills that are subject of study, as well as to know extent of impact of these methods in physical education lesson, and possibility of raising level of psychological flow.

Research problem

The essence of educational process is interest in learner in terms of his acquisition of sports skills and activities, as well as developing spirit of innovation, quick thinking and making right decision in solving various motor duties. Through researcher's follow-up, she noticed that there is a weakness in learning basic football skills. researcher attributes this weakness to fact that some methods of applying physical education lesson depend on teacher's ability and may not be consistent with learner's ability, which makes him a recipient and responder to teacher's orders and not giving sufficient opportunity to develop his skill and psychological level, as well as their lack of interest in strengthening psychological skills of students in various sports activities because it leads to integrated preparation of athletes. Therefore, researcher sees fit to use modern teaching methods in learning basic skills in order to develop these skills and raise level of psychological flow.

Research objectives

1. Preparing and standardizing psychological flow scale for first-year students in College of Physical Education and Sports Sciences, University of Maysan, in subject of football.
2. To identify impact of self-implementation and multi-level application methods on developing football skills and raising level of psychological flow of first-year female students in College of Physical Education and Sports Sciences at Maysan University in football subject.
3. To identify which of two approaches is better for developing football skills and raising level of psychological flow among first-year female students in College of Physical Education and Sports Sciences at Maysan University, who are studying football.

Research hypothesis

1. Both self-application and multi-level application methods have a positive impact on developing football skills and raising level of psychological flow of first-year female students in College of Physical Education and Sports Sciences at Maysan University in football subject.
2. The multi-level approach has advantage of developing football skills and raising level of psychological flow of first-year female students in College of Physical Education and Sports Sciences, University of Maysan, in football subject.

Research areas

- **Human Resources:** First-year female students in College of Physical Education and Sports Sciences, University of Maysan, for academic year 2023-2024.
- **Time frame:** From 10/25/2023 to 5/4/2024.
- **Spatial area:** Stadiums of College of Physical Education and Sports Sciences - University of Maysan.

Research methodology and field procedures

Research Methodology

The researcher used descriptive approach with survey method to measure flow among first-year female students in College of Physical Education and Sports Sciences at University of Maysan. She also used experimental approach with equivalent groups method to develop football skills.

Research community and sample

The research community was determined, which is represented by students of College of Physical Education and Sports Sciences at University of Maysan, numbering (304) female students for academic year (2023-2024), distributed into (6) classes, and by random method and lottery method, classes (A, B, C) were chosen, as class (A) represented control group, while class (B) represented first experimental group, while class (C) represented second experimental group. Thus, number of female students in three classes is (171) female students, (50) female students were chosen randomly, and thus percentage of sample is (16.44%), which is an appropriate percentage to represent research community in a true and honest manner, as shown in Table (1).

Table 1: Shows number of individuals in research sample and their percentage for three groups

Group name	Branch	Students No.	Exploratory	Rationing Sample	Application Sample	Percentage
Control group	A	60	20	-	16	15.89 %
First Experiment (Multi-Level)	B	56	20	-	16	
Second Experiment (Self-Application)	C	57	20	-	16	
Scale standardization sample	D	55	5	55	-	43.38 %
	A	39	9	39	-	
	B	37	7	37	-	
Total	-	304	81	131	48	86.09%

Field research procedures

Procedures for preparing and standardizing psychological flow scale

Preparing and assembling psychological flow scale items

The scale consists of a number of paragraphs, and type of paragraph is determined according to several considerations, most important of which are:

1. The function or functions that test measures.
2. Purpose of test.
3. Type of sample to be measured.
4. Time and cost limits.
5. The validity and reliability of paragraphs.
6. Procedures followed in designing scale.

After reviewing literature and previous studies and examining relevant scales, researcher adopted psychological flow scale prepared by Asaad Falih (2020) [1], which contains (56) paragraphs. researcher reformulated its paragraphs to suit nature of sample and subject of study. After completing process of preparing paragraphs, work was done to collect them in one scale or test, and correction key was as follows:

Always	Mostly	Sometimes	Rarely	At all
5	4	3	2	1

Determining validity of items of psychological flow scale

After preparing scale paragraphs in its initial form, which numbered (56), they were presented to (11 experts) from specialists to determine their suitability to represent what they were designed for and an expert in Arabic language. After collecting and transcribing data, researcher used (Chi-square) test to identify valid paragraphs from others, and results showed validity of (56) paragraphs, and Table (2) shows that.

Setting scale instructions

In order to complete initial formula of scale, researcher prepared instructions, taking care to be clear and indicating that what researcher obtained is for scientific research purposes, as answer instructions included in research tool are a guide for respondent, and they also clarify his idea about test, its time, and way of answering. These instructions are prepared in exploratory experiment, and in its final form, and it is necessary to be precise in putting these instructions, as they affect test results. (1) These instructions are written on a separate page of test pages, and test administrator must follow them and, if necessary, read them without modification or change in them, and for all testees, as stated in instructions.

The instructions were presented to (3) experts to determine validity of instructions and to amend or delete them if necessary. These instructions were agreed upon by experts without any addition, deletion, or amendment.

Exploratory experiment

The scale items may not be as clear to examinees as they are to researcher. Therefore, scale designer conducts a pilot experiment on a group of examinees to learn:

- The examiners' opinion on instructions and detection of their weaknesses in terms of formulation, content and language suitability.
- The time it takes to complete test.
- Efficiency of support team.
- Identify ambiguous, difficult, or unclear paragraphs for reprinting or rephrasing.

Thus, researcher conducted her exploratory experiment on Tuesday and Wednesday, corresponding to 17-18/11/2023, on a sample consisting of (21) female students representing a percentage of (15.8%), noting that average time to answer scale is (16) minutes.

Main experiment to standardize scale

The test or scale must have some basic scientific indicators, most important of which are its validity and reliability of its scores [1]. Therefore, researcher began conducting her main experiment on Wednesday, November 25, 2023, which is intended to apply scale. With its (56) paragraphs on standardization sample of (131) female students, to analyze its paragraphs statistically, and choose valid ones from them and exclude invalid ones, depending on degree of difficulty and discriminatory power.

After completing basic experiment, researcher collected data for all members of preparation sample and arranged it in tables, in preparation for statistical analysis.

Correction of psychological flow scale

It is well known that correction method plays an important role in final results of grades, and this information applies to all types of tests, including objective tests [1]. Any scale loses its value if it does not include key to correct answer and correction method through which we extract grades and statistical indicators in a specific and economical time. After completing collection of answer forms for preparation sample, their total grades were extracted to begin process of statistical analysis of scale items.

Statistical analysis of psychological flow scale items

Test construction requires an analysis of its items to determine difficulty or ease of each item and its ability to distinguish individual differences in trait to be measured. process of analyzing scale's items includes a set of procedures

(1) Asaad Nour El-Din: Psychological Flow Tests in Sports Field, Alexandria, Dar Al-Ilm for Printing and Publishing, 2020, p. 49.

(1) Laila Al-Sayed Farahat: Measurement and Testing in Physical Education, 4th ed., Cairo, Kitab Center for Publishing, 2000, p. 76

(1) Salah El-Din Mahmoud Allam: Measurement and Evaluation in Education and Psychology: Its Fundamentals, Applications, and Contemporary Trends, 1st ed., Cairo, Dar Al-Fikr Al-Arabi, 2000, p. 184

carried out by scale designer after correcting answer sheets for its items. In order to construct an effective scale, its items must be carefully examined. Therefore, statistical analysis of scale's items was conducted, and researcher followed following methods:

Table 2: Demonstrates validity of items of Psychological Flow Scale

Paragraph numbers	Validity		Calculated value of Chi^2	Sig.
	Suitable	Not suitable		
18,17,12,10,9,6,5,3,2,1, 19, 30, 49,37,33,32,21,25,26	11	zero	11	Sig.
20,14,13,11,8,7,4, 24, 27, 28, 56,53,50,31,29,23,22, 45	10	1	7.36	Sig.
41,40,39,38,36,35,34,32,42,55, 54,52,51,48,47,46,40,44,43	9	2	4.45	Sig.
* tabular value of (Chi2) under degree of freedom (1) and significance level (0.05) is (3.84).				

Extracting discrimination coefficient

To reveal discriminating power of psychological flow scale items, two extreme groups method was used, as this method is considered one of appropriate methods for distinguishing items. total scores obtained by students after correcting scale were arranged in descending order, then highest and lowest percentage (27%) of scores were chosen to represent two extreme groups, and middle percentage (46%) was excluded. On this basis, each extreme group included (35) students. To calculate discrimination coefficient for each of scale items, which amounted to (56) items, t - test was used for two independent samples using Statistical Package for Social Sciences (SPSS). statistically significant t-value was considered an indicator of discrimination of items. It was found that all scale items have discriminating power, so they were accepted, as their calculated t-value is greater than their tabular value, which amounted to (1.99) [1] at a degree of freedom (68) and a significance level of (0.05), and Table (3) shows this.

Table 3: Shows T-values of Psychological Flow Scale items.

No.	Lower group		Top Group		(t) value	Sig. level
	Mean	St.d	Mean	St.d		
1	3.47	1.19	4.59	0.75	4.15	0.000
2	3.47	1.04	4.34	0.97	3.47	0.001
3	3.44	1.52	4.56	0.75	3.47	0.000
4	3.06	1.21	3.84	1.05	2.75	0.008
5	3.06	1.29	4.09	1.17	3.34	0.001
6	3.06	1.36	4.44	0.71	5.04	0.000
7	3.19	1.37	4.53	0.80	4.77	0.000
8	3.25	1.27	4.41	0.94	4.13	0.000
9	3.19	1.32	4.28	0.77	3.97	0.000
10	3.34	1.47	4.50	0.76	3.95	0.000
11	3.41	1.31	4.25	0.98	2.90	0.005
12	3.38	1.26	4.47	0.98	3.86	0.000
13	3.16	1.46	53.4	04.1	33.4	000. 0
14	3.34	1.31	16.4	05.1	74.2	000. 0
15	3.28	1.17	72.4	52.0	34.6	000. 0
16	3.28	1.32	56.4	84.0	62.4	000. 0
17	2.84	1.29	34.4	93.0	30.5	000. 0
18	3.19	1.35	78.4	49.0	26.6	000. 0
19	3.25	1.31	72.4	45.0	95.5	000. 0
20	3.41	1.54	47.4	67.0	57.3	001. 0
21	3.25	1.19	81.4	39.0	04.7	000. 0
22	13.19	1.49	53.4	62.0	91.4	000. 0
23	3.16	1.43	34.4	90.0	96.3	000. 0
24	3.09	1.53	69.4	53.0	56.5	000. 0
25	3.66	1.18	75.4	56.0	72.4	000. 0
26	3.53	1.34	31.4	89.0	24.2	008. 0
27	3.97	1.51	50.4	67.0	50.5	000. 0
28	3.06	1.62	88.4	42.0	11.6	000. 0
29	88.2	1.18	44.4	84.0	09.6	000. 0
30	3.75	1.10	56.4	71.0	49.3	001. 0
31	3.16	1.37	66.4	82.0	30.5	000. 0
32	3.03	1.44	13.4	94.0	58.3	000. 0
33	3.25	1.27	34.4	02.1	68.3	000. 0
34	2.81	1.30	03.4	12.1	01.4	000. 0
35	3.25	1.31	44.4	80.0	35.4	000. 0
36	3.43	1.57	81.4	39.0	11.5	000. 0
37	3.56	1.68	72.4	81.0	50.3	000. 0
38	3.38	1.66	19.4	14.1	28.2	000. 0
39	3.72	0.88	81.4	69.0	49.5	000. 0

(1) book of authorship and translation. Statistics using SPSS, 1st ed., Syria, Shuaa for Publishing and Sciences, 2007, p. 747

40	3.09	1.25	47.4	80.0	23.5	000. 0
41	3.00	1.52	25.4	91.0	98.3	000. 0
42	3.75	1.24	84.4	57.0	64.8	000. 0
43	3.53	1.21	34.4	09.1	26.6	000. 0
44	3.44	1.36	47.4	80.0	68.3	000. 0
45	03.3	40.1	44.4	75.0	99.4	000. 0
46	25.3	48.1	31.4	09.1	27.3	000. 0
47	00.3	29.1	81.4	47.0	98.6	000. 0
48	22.3	12.1	28.4	99.0	00.4	000. 0
49	97.2	17.1	38.4	03.1	07.5	000. 0
50	19.3	46.1	65.4	64.0	29.5	000. 0
51	47.3	39.1	63.4	94.0	89.3	000. 0
52	03.3	28.1	63.4	65.0	25.6	000. 0
53	03.2	33.1	31.4	89.0	52.4	000. 0
54	66.2	15.1	44.4	84.0	06.7	000. 0
55	94.2	24.1	28.4	05.1	66.4	000. 0
56	25.3	21.1	56.4	84.0	02.5	000. 0

Scientific basis of psychological flow scale

The conditions for constructing a scale are of great importance in ensuring its soundness and scientific nature. general conditions for measuring instruments are also of great importance in ensuring success of measurement process. most important of these conditions are validity, reliability, and objectivity of measuring instrument. following is an explanation of this:

Scale validity

The degree of validity is most important factor for quality criteria of tests and scales. apparent validity of scale was determined based on opinions of experts and specialists, and Chi-square test was used, as it was presented to (9) experts in field of research to determine validity of paragraphs. As for construct validity, it was verified by two extreme groups, while researcher verified validity of internal consistency through relationship of paragraph score to total score of scale using Pearson's correlation coefficient.

Scale stability

To verify stability of psychological flow scale, researcher used split-half method. This method depends on dividing scale after applying it to a specific group into two equal parts and calculating correlation between these two parts. split-half method is one of most widely used stability methods, due to its economy in effort and time. (56) paragraphs of scale were divided into odd and even paragraphs, and homogeneity of two halves of test was verified using (F) test, and its calculated value was (0.83), which is smaller than its tabular value of (1.00) at two degrees of freedom (130 - 130) and a significance level of (0.05) [1].

on basic experimental sample forms, which amounted to (131) forms, to calculate reliability coefficient in this way. correlation coefficient between these two halves was extracted and its value was (0.81), and this value indicates reliability of one half of test. Spearman-Brown equation was used to find reliability coefficient of test as a whole. reliability coefficient of test as a whole was (0.90), which is a good indicator of reliability of scale. We must not forget that there is a close correlation between reliability and standard error, and thus value of standard error reached (0.85).

Selection of basic football skills: The basic football skills were selected in light of curriculum for first stage in Iraqi universities, approved by Ministry of Higher Education for academic year (2014-2015).

Choosing appropriate test to measure skill

The researcher prepared a questionnaire form to choose appropriate test to measure skills under study, with (3) tests for each skill. After that, form was presented to those with experience and expertise, numbering (11) experts. After emptying forms, validity of tests was extracted through value of (Chi2), and tests that obtained highest percentage of agreement were nominated, as shown in Table (4).

Football passing Skill Test [1]

Test name: passing towards a small target 20m away.

Objective of test: To measure passing accuracy.

- **Tools used:** Football field, legal football (5), small goal (110cm x 63cm), evaluation form (3), signs (3)
- **Test Description:** A line of (1 m) length is drawn at a distance of (20 m) from small goal, and a fixed ball is placed on starting line as shown in Figure (1). student stands behind starting line facing small goal, and when signal is given, he begins to pass ball towards goal so that it enters it. Each student is given (5) five consecutive attempts.

Registration method: Score is calculated based on total of five as follows:

- Two points for each correct attempt that goes into small goal.
- One point if ball hits post or crossbar and does not enter goal.
- Zero if ball goes out of small goal
- The highest score a student can get is (10) points out of (5) attempts.

Testing skill of scoring from a standing position with a football [1]

- **Test name:** Shooting from a standing position at a

(1) Ali Maher Khattab. Inferential Statistics in Psychological, Educational and Social Sciences. 1st ed. Giza: Al-Omrania Offset Printing Press, 2008, p. 715.

(1) Zuhair Qasim Al-Khashab and others: Designing and standardizing tests to measure some basic skills in football, Mosul - University of Mosul - Higher Education Press, 1990, p. 278

(1) Ahmed Abdel Amir: effect of open exercises in developing sensory-motor perception of ball for some basic skills for young soccer players, a study published in Al-Qadisiyah Journal of Physical Education Sciences, Volume 8, Issue 3, 2008, pp. 7-8.

distance of (16) meters.

- **Objective of test:** To measure ability to score on goal with preferred foot.
- **Equipment used:** (8) legal footballs, a football goal divided by tape into (8) squares, each square measuring 80cm x 80cm, and each square has a specific score that student gets if he succeeds in scoring into it. A line is drawn parallel to goal line, (16)m away from it, and (8) balls are placed on it, and distance between each ball is (100cm), and Figure (2) shows this.

Table 4: Shows skills tests under consideration that have been nominated.

Skill	Test		Agree	Disagree	Chi^2	Sig.
Passing	1	Passing towards a small target from 20m away.	10	1	7.36	Sig.
	2	Rebound pass on a wall 10 m away for 20 seconds.	1	10	7.63	Insig.
	3	Rebound pass on a wall 20 m away for 30 seconds.	0	11	11	Insig.
Scoring	1	From scoring control to overlapping rectangles drawn on a wall	0	11	11	Insig.
	2	Scoring from a standing position at a distance of (16) meters	10	1	7.63	Sig.
	3	Rebounding goals on overlapping targets painted on a wall	1	10	7.63	Insig.

(Table value of $Chi^2 = 3.84$)

Test description: student being tested must score at four corners of goal, and for each corner there are two attempts. If student stands behind ball (1), and when he is given signal to start, he aims ball at goal where highest score is, and repeats scoring with ball (2), then he scores at other corner, and so on until he ends up scoring ball (8), provided that student takes appropriate and sufficient time to execute scoring.

Scoring method: number of goals scored in or touching sides of designated targets on each side of target is calculated, so that score for each of eight balls is calculated as follows.

- (3) Points when scoring in field number (3).
- (2) Two degrees when aiming in field number (2).
- Degree when scoring in field number (1).
- (Zero) in rest of other target areas.

The highest score a student can obtain is (24) points through (8) attempts.

Exploratory experiment

The pilot experiment is a miniature experiment of main experiment, and conditions and circumstances of main experiment must be available as much as possible in order for it to be adopted [(1).] On this basis, pilot experiment was conducted on Wednesday (11/18/2023) at nine o'clock in morning on a sample consisting of (60) female students from sections (A, B, C) of original research community, and they were also selected randomly and from outside research sample.

Pre-tests

The researcher conducted pre-tests for research sample included in study on (Wednesday and Thursday 11/25-26/2023) at nine o'clock in morning.

Implementation of educational curriculum

The educational curriculum is "all planned experiences (activities or practices) provided by educational institution to help students achieve desired academic outcomes to best of their abilities [1]." Through researcher's review of some sources related to her work [2], researcher developed an educational curriculum. two methods include self-application and multi-level application, and in order for results to be accurate and not biased towards either method, subject teacher was assigned to implement curriculum on research sample under direct supervision of researcher. curriculum was implemented on Sunday 12/1/2023 and educational curriculum took a period of (8) weeks and number of educational units per week is two units, number of educational units for each skill is (8) units in four weeks, total number of educational units for both skills is (16) educational units and time for each educational unit is (40) minutes.

Self-application method group

The educational unit begins with a general warm-up, followed by a specific warm-up. After that, each student completes work herself, based on worksheet prepared by researcher. This worksheet was presented to three experts and specialists to determine its suitability and possibility of student using it. When each student begins performing work, if achievement is similar to what is on worksheet, she can move on to next piece of work. However, if there is an error in performance, student only has to repeat and correct error, and then move on to next piece of work.

Multi-level method group

The units for this method are implemented by student around starting work and level at which they can start, and teacher's duty is to make decisions during teaching phase, including entering to perform work at level they can successfully perform, as well as decisions after lesson and their evaluation. That is, work steps are by teacher giving homework after explaining work steps, and then teacher sets a set of levels in which he takes into account students' motor abilities, and students perform skill according to level that enables them to perform duty, whether it is lower or higher, and in a way that suits them. After that, students perform work according to their physical and motor capabilities, and students evaluate themselves, and after that teacher encourages students to improve their level.

Group of methods followed by teacher

The subject teacher applies method followed by him in implementing special units and with same number of educational units and repetitions applied in both first and second groups. teacher is unique in making decisions in this method in all stages of lesson (before lesson, during lesson, after lesson) and student has no choice but to obey those orders and implement what should be done.

Post-tests

After completing curriculum, which amounted to (16) educational units in a period of (8) weeks, at a rate of two units per week, to learn skills of (handling and scoring) in football, post-tests were conducted for both skills and for three research groups, under same conditions and circumstances in which pre-tests were conducted, on Monday (2/4/2024) at nine o'clock in morning.

Statistical methods

The necessary statistical methods were used to help in processing results and testing research hypotheses through use of statistical package (SPSS), including extracting arithmetic mean, standard deviation, mode, skewness coefficient, and simple correlation coefficient. (Pearson), chi-square, Analysis of variance test, least significant difference (LSD) test, t- test for matched samples, and rate of development.

Presentation, analysis and discussion of results

Display of test results for handling skill and for three research groups

Table 5: It shows values of arithmetic means and standard deviations, calculated (t) value, and tabular relationship between pre- and post-tests of handling skill and for three research groups.

Groups	Pre-test		Post-test		(t) value	Sig.	Development rate
	Mean	St.d	Mean	St.d			
First experimental	2.31	0.60	6.38	1.31	11.27	Sig.	63%
Second experimental	2.38	1.70	4.81	1.64	4.12		50.51%
Control	2.50	0.73	3.31	1.13	2.40		24.47%

Degree of freedom (15), and significance level (0.05).

The results for first experimental group showed a calculated value of (t) of (11.27), which is greater than its tabular value of (2.00). This indicates presence of a significant difference between two tests in favor of post-test, with a development rate of (63%). As for second experimental group, calculated value of (t) was (4.12), which is greater than its tabular value of (2.00). This indicates presence of a significant difference between two tests, in favor of post-test as well, with a development rate of (50.51%).

As for control research group, calculated value of (t) was (2.40), which is greater than its tabular value of (2.00). This indicates presence of a significant difference between two tests in favor of post-test, with a development rate of 24.47%.

Displaying results of (f) test for analysis of variance for post-tests of handling skill and for three research groups

Table 6: Shows results of (F) test for analysis of variance between three research groups for post-test of football handling skill.

Source of variance	Sum of squares	Freedom Degree	Mean squares	value of (F)	Table F value	Sig. level	Sig. type
Between groups	75,042	2	37,521	19,719	3.15	0.000	Sig.
Within groups	85,625	45	1.903				
Total	160,667	47					

The results of analysis of variance test for handling skill among three groups show that calculated value of (F) of (19.719) is greater than its tabular value of (3.15) at two degrees of freedom (63.2), and below significance level of (0.00), and this indicates that there is a difference in effect of methods on development of handling skill among three groups.

Presentation of results of LSD test for handling skill tests and for three research groups

Table 7: LSD test show least significant difference between three groups in skill of handling a football.

Groups	difference between means	Team results	Least significant difference value calculated LSD	Sig.
Experimental 1 Experimental 2	6.38-4.81	1.56*	0.56	Sig.
Experimental 1 Control	3.31 - 6.38	3.06*		
Experimental 2 Control	3.31-4.81	1.50 *		

Table (7) shows that difference in arithmetic means in post-tests was (1.56), which is higher than calculated (LS D) value of (0.56), and at a significance level of (0.05). Significant differences appeared between first group and control group in favor of first group because difference in arithmetic means between them was (3.06), which is greater than calculated (LS D) value of (0.56) and in favor of first group (multi-level). Likewise, significant differences appeared between second and control groups in favor of second group because difference in arithmetic means between them reached (1.50), which is greater than calculated (LS D) value of (0.56). Therefore, best group sequence for handling skill is first group (multi-level), followed by second group (self-application), then control group.

Presentation and analysis of results of pre- and post-test of scoring skill for three research groups

Table 8: It shows arithmetic means, standard deviations, and value of (t) between pre- and post-tests of scoring skill for three research groups.

Groups	Pre-test		Post-test		(t) value	Sig.	Development rate
	Mean	St.d	Mean	St.d			
Experimental 1	2.94	1.96	13.81	1.73	9.49	Sig.	78.7 1%
Experimental 2	2.56	1.99	9.74	1.64	8.95		73.71%
Control	2.38	1.02	7.50	1.86	7.08		68.26%

(t) value for first experimental group was (9.49), which indicates presence of a significant difference between two tests in favor of post-test and with a development rate of (78.71%). As for second experimental group, calculated (t)

value was (8.95), which is greater than tabular (t) value of (2.00) with a degree of freedom of (21), and below a significance level of (0.05), which indicates presence of a significant difference between two tests in favor of post-test as well and with a development rate of (73.71%). As for control group, calculated (t) value was (7.08), which is greater than tabular (t) value of (2.00) with a degree of freedom of (21) and below a significance level of (0.05), which indicates presence of a significant difference between two tests in favor of post-test and with a development rate of (68.26%).

Displaying results of (f) test for analysis of variance for scoring skill tests and for three research groups

Table 9: Shows results of (F) test to analyze variance between three groups for post-test. For football scoring skill

Source of variance	Sum of squares	Freedom Degree	Mean squares	value of (F)	Table F value	Sig. level	Sig. type
Between groups	324,292	2	162,146	20,080	3.15	0.000	Sig.
Within groups	363,375	45	8,075				
Total	687,667	47					

The results showed significant differences between groups because calculated (F) value of (20.080) is greater than tabular (F) value of (3.15) at two degrees of freedom (2), and under a significance level of (0.000), and this indicates that there is a difference in scoring skill between three groups.

Presentation of results of (LSD) test for scoring skill tests and for three research groups

Table 10: Shows results of (LSD) test to find out least significant difference between three groups in football scoring skill

Groups	Difference between means	Team results	LSD	Sig.
First experimental Second experimental	13.81 - 9.74	3.88	0.48	Sig.
First experimental Control	7.50 - 13.81	6.31		
Second experimental Control	7.50 - 9.94	2.44		

The results of (LSD) test to determine significance of differences between three arithmetic means of scoring skill, there are significant differences between first and second groups in favor of first group because difference in arithmetic means of post-tests between them was (3.88), which is higher than calculated (LSD) value of (0.48) and at a significance level of (0.05). Likewise, significant differences appeared between first and third groups, in favor of first group because difference in arithmetic means between them was (6.31), which is greater than calculated (LSD) value of (0.48).
There were also significant differences between second group and control group in favor of second group because difference in means between them was (2.44), which is greater than calculated (LSD) value of (0.48). Therefore, best group in terms of skill and scoring is first group, followed by second group, then control group.

Presentation and analysis of results of pre- and post-test of psychological flow test for three research groups

Table 11: Shows differences between single group and three research groups

Groups	Test	Sample number	Mean	St.d	T value	Significance level
Experimental 1	Pre	16	236.81	3.66	34.76	0.00
	Post	16	273.06	5.13		
Experimental 2	Pre	16	236.31	5.50	5.75	0.00
	Post	16	261.25	6.12		
Control	Pre	16	236.00	4.75	2.33	0.03
	Post	16	242.81	7.99		

It is found that value of arithmetic mean and standard deviation for first experimental group reached a calculated value of (t) (34.76) with a significance level of (0.00), which is less than a significance level of (0.05), indicating existence of a significant difference between pre- and post-tests in favor of post-test. As for second experimental group, calculated value of (t) reached (5.75), with a significance level of (0.00), which is less than a significance level of (0.05), indicating existence of a significant difference between pre- and post-tests in favor of post-test. As for control group, calculated value of (t) reached (2.33), with a significance level of (0.03), which is less than a significance level of (0.05), indicating existence of a significant difference between pre- and post-tests in favor of post-test.

Presentation of results of (F) test for analysis of variance for psychological flow test and for three research groups

Table 12: Shows results of F test for analysis of variance between three groups for post-test of psychological flow.

Source of variance	sum of squares	Degree of freedom	Mean squares	value of (F)	Significance level	Statistical significance
Between groups	7437.542	2	3718771	28575	0.006	Sig.
Within groups	5856.375	45	130,142			
Total	13293.917	47				

The results of analysis of variance between three groups show that there are significant differences between groups, because calculated (F) value of (28.575) is greater than tabular (F) value of (3.15) at two degrees of freedom (2), and under a significance level of (0.05), and this indicates that there is a difference in effect between three groups.

Presentation of results of LSD test for psychological flow test and for three research groups

To know which of three groups has an advantage, researcher used (LS D) test.

Table 13: Shows results of LSD test to determine least significant difference between three groups.

LSD test			
Groups		Mean differences	Sig. level
First experimental	Second experimental	11.81250 *	.000
First experimental	Control	-30.25000- *	.000
Second experimental	Control	-18.43750- *	.005

The table shows that there are significant differences between first and second groups in favor of first group because difference in arithmetic means of post-tests between them was (11.81), and there were also significant differences between first group and control group in favor of first group, because difference in arithmetic means between them was (-30.25). There were significant differences between second group and control group in favor of second because difference in means between them was (-18.43), so best group in order is first group, followed by second group, then third group.

Discussion

Discussion of results of football skills test

The three research groups showed a development in terms of moral influence, with significant differences between those groups. researcher attributes reason for these differences among groups to influence of educational curriculum represented by type of methods, number of units prescribed within curriculum, and two skills of handling and scoring, which are subject of study. Other factors that contributed to this development included appropriate repetitions that accompanied educational units, as well as selection of exercises appropriate to degree of difficulty of skill, taking into consideration their suitability for research sample and their capabilities, while avoiding difficult exercises that do not guarantee performance from everyone and necessity of benefiting from educational devices and means that work to increase speed of learning. Thus, curriculum vocabulary agreed with what (Mufti Ibrahim) stated that "the coach's selection of difficult exercises will increase experience of some players, but not all of them [1].

It must be noted that clarity of general objective of educational curriculum and its suitability to students' level and ability has clearly contributed to improving level of technical performance of basic football skills. This is what (Fouad Suleiman) indicated that "clarity of objectives and their definition in behavioral images, or specific levels of performance, is meaningful and effective" [1].

That is, there must be a programmed organization that ensures better learning of these two skills. Also, factor that showed a degree of development for both groups is: extent to which these methods are appropriate to level and abilities of learners, on one hand, and on other hand, it is necessary to take into account extent to which performance is compatible with level of effort expended, which is one of important points that must be pointed out in practical stages of skill. In this regard, (Abdul Ali Naseef) indicated that "programmed physical exercises have a great effect in increasing amount of learning [2]."

The results of (LS D) test to determine least significant differences in skills of handling and scoring showed that (multi-level) method used by first group is best method for training in developing these two skills, and researcher attributes This is because freedom of movement in terms of choosing level and student's capabilities increased number of repetitions when applying exercises prepared for skill of handling and aiming, which gave student appropriate time for practice and repetition, as they are two most used skills, in addition to fact that increase in repetition during successive educational units and consequently increased learning, its reinforcement and mastery, and this is what (Schmidt) confirmed that "teachers or trainers are required to encourage learners to perform largest possible number of exercise attempts as much as possible [1]." When comparing second group with control group, results indicated superiority of second group. This is attributed to fact that student's use of feedback to himself through homework sheet helped increase practice period, as homework sheet contains steps of technical performance of skill. Jamal Nasser et al. [2] indicate that most important purpose of homework sheet is to reduce number of times teacher explains skill in order to increase time allocated for performance. table also showed that results of handling and scoring skills test according to methods used in research are presence of a significant difference between first and control groups, in favor of first group. This is attributed to possibility of teacher providing many sequential options in difficulty, which made student achieve best levels. A significant difference also appears between second group and first group in favor of first, and this is attributed to reliance on personal abilities in terms of providing feedback.

The researcher also attributes superiority of (multi-level) method to fact that increase in practice of handling and scoring exercises from different distances and places led to this superiority, in addition to learner's use of his abilities in carrying out motor duties, which led to learner's excitement in carrying out those duties. researcher also believes that educational devices, tools and means have a great impact on exciting and thrilling learner, especially since they are similar to conditions of matches, and this is what was emphasized in "creating motor programs that learner benefits from, which work to help him perform skills in best and most appropriate way" [2, 1]. It must also be noted that recent studies emphasize activation of role of learner and making him an active participant in educational process, not a recipient of everything that is presented to him. This requires optimal use of modern methods and techniques based on stimulating learner's thinking to reveal new and innovative ideas with clear encouragement from teacher [2].

Siedentop pointed out that "it is necessary to receive information in a way other than teacher's speech by finding and creating methods to convey information to students, and reducing teacher's speech is one of most important challenges to improve teaching in physical education." But it remains for us to mention that in this study we do not want to diminish importance of imperative method that depends on teacher's own information and ideas, but rather we want students and teachers to diversify in using methods that give student a greater role in learning process and that suit ages of learners, as well as type of skill.

Discussion of results of psychological flow test for three research groups

From what was presented in Table (20, 19, 18) there is a significant difference between pre-tests of psychological flow and three research groups with regard to control group. reason for raising level of psychological flow among students is their commitment to attendance and their constant perseverance, and to implementation of educational units by teacher who

(1) Mufti Ibrahim Hammad. Sports Training for Both Sexes from Childhood to Adolescence, 1st ed., Cairo: Dar Al Fikr Al Arabi, 1996, p. 199.

(1) Fouad Suleiman Qalladah. Educational Objectives and Curriculum Teaching, Alexandria: Dar Al-Matbouat Al-Jadida, 1989, p. 177.

(2) Kurt Meinl. Source previously cited, p. 260.

(2) Jamal Nasser (and others): Teaching Physical Education, University of Mosul, Dar Al-Hikma for Printing and Publishing, 1991, p. 57.

(1) Schmidt and Wrisberg, (2000), op. cit. p.20

(1) Nahida Abdul Zaid. Source previously mentioned, p. 22.

followed established method.

As for first and second experimental groups, researcher attributes reason for raising level of psychological flow to quality of educational units that included exercises prepared in a way that suits ages of sample and their level of ability, in addition to adopting scientific foundations in organizing this in terms of number of units, number of repetitions, level of ease, difficulty, and rest times, in addition to using principle of suspense and excitement, which had a clear effect in acquiring and developing basic skills. Hence, this development was a reason for raising psychological flow, and from researcher's point of view, He believes that self-application method, which includes units on several matters, including giving students opportunity to rely on themselves in making decisions, was a motive in developing students and making them able to bear responsibility, in addition to setting goals, self-assessment, and realizing balance between challenges and skills, with increased focus, which requires that student have desire to learn and develop through a state of positive emotional feelings that lead to a positive reaction towards practiced activity. Thus, he sees Jackson & March (1996) stated that psychological flow is a state in which individual is highly integrated, leading to optimal physical and mental performance. It is viewed as a state of altered consciousness in which individual feels immersed in activity, and in which body and mind work together. As for multi-level method, researcher attributed reason for this method to fact that it was designed in a way that ensured that students would perform according to their ability in class. Therefore, researcher took into account individual differences through their abilities. In addition, conditions were established that ensured that everyone would perform to minimum level of duty, which created a spirit of competition among students and continuous encouragement. From this standpoint, researcher believes that this method raised level of psychological flow, creating a positive psychological state in which emotional feelings flow, leading to an optimal level of excitement that players aspire to improve their performance in a positive way. Therefore, Tellegen et al. [1] (The state of psychological flow represents a state of positive arousal that decreases significantly with activity associated with a state of relaxation and boredom).

As for differences between two experimental groups, there was a difference in psychological flow in favor of first group. researcher attributes this to students' evaluation of their own performance, which created a state of challenge for student with himself through performance according to ability of each student in class. In addition, there was a spirit of competition with colleague and encouragement to work harder and make an extra effort. As a result, this development was a reason for raising psychological flow.

Conclusion and recommendations

Conclusion

After conducting tests using three methods to develop skills of handling and scoring, following conclusions were reached:

1. The three methods (multi-level, self-application and follow-up) achieved their goals in developing skills of handling and scoring football, to varying degrees.
2. The multi-level approach was best method for developing my football handling and scoring skills, followed by self-application approach.
3. The (multi-level and self-application) method has achieved raising level of psychological flow of students through contents, features of these methods, and how to perform them.

Recommendations

1. The necessity of using self-implementation and multi-level educational approach in physical education and sports lessons to develop skills of handling and scoring.
2. The necessity of adopting psychological flow scale as an indicator in subject of football.
3. Increase number of tools used in lesson so that students can perform skills or practice continuously and without stopping.
4. Emphasis on guiding educational workers And training with interest in psychological aspect of players.
5. The necessity of change and diversification in educational methods to make process of learning skills more interesting.
6. Conduct a similar study on sporting events.

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