



## **The effect of an educational approach using the comparative competition method in teaching the ready stance and some leg movements in foil for people with special needs and hearing impairments**

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### **Abstract**

The research included four chapters, where the first chapter included the introduction to the research and its importance, in which the researchers addressed a general introduction to the subject of the study and its variables. The educational methods in the skill learning process and the comparative competition method and its importance in particular were also addressed, as well as the fencing game and the foil weapon and its importance, in addition to the importance of the skill of leg movements with the foil weapon in attacking and obtaining points through which victory in the game is achieved. The same chapter also included the research problem, in which the researchers stated that the skill learning process for the disabled, especially in teaching leg movement skills with the foil weapon, is done through the traditional method followed (the imperative) in which the teacher exerts great effort in explaining and presenting through the skill presentation by the teacher himself, as well as supervision and feedback to correct errors. Thus, the research problem was in answering the question (Do competition methods, including (comparative), achieve the development of some fencing skills?). The first chapter also included the objectives of the research, including preparing an educational curriculum. The comparative method for teaching the ready stance and some leg movements with foil for hearing-impaired students from the research sample and identifying the effect of the educational method with the comparative method for teaching some leg movements with foil for hearing-impaired students from the research sample. The same chapter included the most important hypotheses that the researcher set in his study, including that there are statistically significant differences between the pre- and post-tests of the experimental and control groups for deaf and dumb students in the ready stance and some leg movements with foil for hearing-impaired students. The first chapter also included the research areas (human, temporal, spatial). The research also included the third chapter, in which the researcher addressed the experimental method used in the study and the research community, which are the students of the Amal Institute for the Deaf and Dumb in Qadisiyah, numbering 63 male and female students distributed among the (fifth and sixth) primary classes, with 41 males and 22 females. The <https://doi.org/10.58305/ejsst.v15i55.550>  
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same chapter also included the research tools and methods used in the study and identifying the study variables and describing the tests. The research also addressed the scientific foundations of the study tests, and the chapter itself included the field procedures of the research from the exploratory experiment and the pre-test, as well as the mechanism for applying the educational curriculum used in the study and the post-test and the method of performing it. The research also included the fourth chapter, in which the results reached by the researchers during their experiment and tests were presented, analyzed and discussed, as the results of the experimental and control groups were presented separately, and then the results of the two groups were presented in one table for comparison between them, and then the results were discussed according to each group. The research also included the fifth chapter, in which the researchers mentioned the most important conclusions they reached during their experiment, including that there is a clear effect of the comparative method in teaching the ready stance and some leg movements in the foil weapon in fencing for hearing-impaired students. The ready stance skill was better in terms of learning than the rest of the selected skills. Chapter Five also included the most important recommendations made by the researchers in light of the above conclusions, including the necessity of applying the comparative teaching method as one of the modern teaching methods in teaching foil skills to the disabled (deaf). (Mute) and the use of performance photography in physical education curricula for the disabled in various activities that are dominated by the practical aspect of motor skills. The necessity of applying micro-teaching as one of the modern teaching methods in teaching basketball skills to female students and the use of performance photography in physical education curricula and its various activities that are dominated by the practical aspect of motor skills.

## 1- Chapter One

### 1-1 Introduction and importance of the research:

The use of modern methods in the process of skill education works to raise the efficiency of the learning process among individuals more than using traditional methods, and the successful teacher is the one who is good at applying more than one method, and is interested in taking into account the tendencies and trends of learners because these tendencies and trends represent motives to stimulate the individual, and among the methods that have proven their effectiveness in increasing and accelerating education and developing skills more quickly than other methods are competitive methods. Competition is an important and necessary motive in the lesson, as the student's preparation and participation alone does not have any meaning, but it gains its meaning from its connection to the student's level in order to obtain the best possible level of competition, and in light of this, competition is the best aid in developing and improving the skills and abilities of the individual. (Al-Azirjawi, 1991, 71).

The deaf and dumb category is one of the basic categories of people with special needs that has received great attention in the field of sports in terms of education, training and participation in tournaments because it is the closest category to normal people in terms of physical, motor and mental components. Therefore, they were chosen in this study to know the effect of comparative competition in the process of developing their skills in fencing and because it is one of the games that depend on achieving goals when practicing it on different methods of competition, and among these methods is the comparative competitive method. Therefore, the importance of the current research lies in developing the level of performance of some basic skills in fencing using the comparative competitive method on a sample of students from the Amal Institute for the Deaf and Dumb in Qadisiyah. 1-2 Research problem:

The process of implementing physical education lessons at Al Amal Institute for the Deaf and Dumb differs, but it tends in most cases to implement these lessons in the traditional way, and most physical education lessons are almost devoid of giving the student a role other than the executive role of the teacher's orders. Several methods have been used recently to achieve the goals of the physical education lesson, including the (comparative competition) method. Within the educational system's interest in the physical education lesson, fencing was included in its curriculum, which contains many skills that are taught and

taught at the institute and in an amount that is appropriate for this age group of students. Also, using the experimental method is an important goal for teachers working in the field of physical education, to reach the best methods that achieve the best results in the education process and for the need to develop the sport of fencing as one of the individual games that this group of people with special needs can learn. Hence, a question arises in which the research problem lies:

Do competition methods, including (comparative), achieve the development of some fencing skills?

### **1-3 Research objectives:**

1- Preparing an educational curriculum using the comparative method to teach the readiness stance and some leg movements with foil for hearing-impaired students from the research sample.

2- Identifying the effect of the educational curriculum using the comparative method to teach some leg movements with foil for hearing-impaired students from the research sample.

### **1-4 Research hypothesis:**

1- There are statistically significant differences between the pre- and post-tests of the experimental and control groups for deaf and dumb students in the readiness stance and some leg movements with foil for hearing-impaired students.

### **1-5 Research areas:**

1- Human field: Students of the Amal Institute for the Deaf and Dumb in Qadisiyah for the academic year 2021-2022.

2- Spatial scope: The courtyards and halls of the Amal Institute for the Deaf and Mute in Qadisiyah.

3- Temporal scope: 2/1/2022 - 3/19/2022.

### **1-6 Definition of Terms**

Comparative Competition: Comparative competition style

(Mohammed, 1983) defined it as "a style of competition that enables the individual to evaluate his performance in relation to the performance of the colleague who shares the same work" (Mohammed, 1983, 282).

(Al-Khayat, 1997) defined it as "one of the styles of competition that stimulates the individual and pushes him towards learning by comparing his performance with the level of skill performance of the competing colleague" (Al-Khayat, 1997, 12).

#### 4- Chapter Three: Research Methodology and Field Procedures

##### 3-1 Research Methodology

The researchers used the experimental method because it is suitable for the nature of the research, as this method is the best that can be followed to reach accurate results, as it is "the only method that can truly test the hypotheses of cause and effect relationships" (Alawi and Rateb, 1999, 217).

##### 3-2 Research community and sample

The research community was deliberately selected from the students of Al-Amal Institute for the Deaf and Dumb in Qadisiyah, numbering 63 male and female students distributed among the (fifth and sixth) primary grades, with 41 males and 22 females. As for the research sample, it was randomly selected from the same students, numbering (20) male students, if they were distributed into two groups, with 10 students for the control group and (10) students for the experimental group. Then, homogeneity and equivalence were conducted in the variables (height, age, targeted skills) as shown in the following Table (1).

Table (1)  
shows the equivalence of the two research samples in the specified variables

Coefficient of skewness	Coefficient of variation	Standard deviation	Arithmetic mean	Unit of measure	Variables
<i>-0.101</i>	<i>0.581</i>	<i>0.894</i>	<i>154</i>	cm	Height
<i>-0.297</i>	<i>4.592</i>	<i>2.342</i>	<i>51</i>	kgm	Weight
<i>-0.322</i>	<i>13.954</i>	<i>1.814</i>	<i>13</i>	year	Age
<i>-0.849</i>	<i>8.073</i>	<i>0.331</i>	<i>4.1</i>	degree	Ready stance.
<i>-0.442</i>	<i>14.281</i>	<i>0.457</i>	<i>3.2</i>	degree	Forward movement.
<i>-0.615</i>	<i>24.147</i>	<i>0.821</i>	<i>3.4</i>	degree	Backward movement.

### **3-3 Experimental design of the study**

The researchers chose the experimental method with two groups with pre-test and post-test to suit the nature of the problem

#### **3-43-4 Means, devices and tools used in the research:**

- Arabic and foreign sources and references
- Tests and measurements used in the research
- Personal interviews
- Observation
- Test performance evaluation form.
- SONY video camera
- Computer
- CD discs
- (3) whistles
- Metal measuring tape

#### **3-5- Performance evaluation forms:**

Performance evaluation form The researcher resorted to preparing forms to evaluate the technical performance of the stages of implementing the performance of the mares under study, taking into account the distribution of the grade according to the type, size and difficulty of the performance. Then, it was presented to a group of specialists in the field of motor learning, sports training and fencing if it obtained an approval rate of (90%), taking into consideration the amendments and suggestions of the specialists.

##### **3-5-1- Scientific foundations for tests:**

To determine the suitability of the test to the research sample, the researcher applied the tests and conducted a pilot experiment on a group of students at an institute for the deaf, mute and normal, numbering (10) students from outside the research sample, with the help of the assistant staff, from 2/1/2022 to 2/3/2022.

The main objective of this experiment is to extract the coefficients of honesty, stability and objectivity, which are among the most important characteristics of a good test. The following are the scientific foundations for the selected tests 0

### **3-5-1-1- Test validity:**

In order to find the validity of the test, the researcher resorted to using the validity of the content (arbitrators), as the validity of the test is one of the most important conditions for good selection, as everyone indicated that it is necessary to ensure the ability of the performance evaluation forms to determine the level of technical performance of the selected skills. The validity of the skill test evaluation form was verified by presenting it to a group of experts and specialists in the field of motor learning, sports training, tests and measurement. After sorting the results, all the selected tests obtained the percentage of approval that will be implemented during filming. It ranged between 85-90%. Thus, the researcher adopted it because it has a high degree of validity, as shown in Table (2). 3-5-1-2- Test stability:

In order to extract the stability of the performance evaluation forms, the researcher resorted to using the retest method. The learners' performance presentation was applied to the group of experts. After a week, the performance was re-presented to the same experts to ensure the stability of the evaluation scores on the form, as "stability means that the test gives the same results if it is repeated on the same group under the same conditions, meaning that if the measurement processes of one individual were repeated, the degree would show some consistency, meaning that his degree does not change fundamentally by repeating the test. After that, the results were sorted. The researcher used the simple correlation coefficient law between the results of the two presentations" to find the stability of the results of the test performance evaluation forms, as the results showed that they are characterized by a high degree of stability, as shown in Table (2).

### **3-5-1-3- Test objectivity:**

The objectivity coefficient was found through the simple correlation coefficient (Pearson) between the results of arbitrators who measure on the same laboratory, taking into account the conditions and method of conducting the test. The results of all the prepared and selected performance evaluation forms were High objectivity, as the subject is one of the basics of new tests, as it shows the

extent of independence of the results from the subjective judgment of the corrector. As shown in Table (2)

Table (2)

shows the stability and objectivity coefficient for the research sample members in the skill tests

<b>T</b>	<b>Skills studied</b>	<b>Honesty</b>	<b>stability</b>	<b>Objectivity</b>
<b>1</b>	Ready stance.	<b>%90</b>	<b>0.80</b>	<b>0.80</b>
<b>2</b>	Forward movement.	<b>%90</b>	<b>0.90</b>	<b>0.80</b>
<b>3</b>	Backward movement.	<b>%85</b>	<b>0.80</b>	<b>0.85</b>

### **3-6- Field research procedures:**

#### **3-6-1- The first exploratory experiment**

The researchers conducted an exploratory experiment with the auxiliary work team on Sunday 1/2/2022 at the Al-Amal Institute in Al-Qadisiyah Governorate on a group of deaf and mute students from the research community, numbering (10) who are outside the research sample and were excluded from the main experiment. During it, the researchers found out the following:

- The extent of students' understanding and comprehension of the tests.
- The time required to implement the tests.
- How to implement the tests.
- The efficiency of the auxiliary team's work and the tools that must be available.

#### **3-6-2- Photography method:**

The researchers resorted to using the photography method for the skill performance of the activities under study by using a (SONY) camera with a speed of 25 images / second, with the help of the auxiliary staff, as they worked to fix the camera at different distances according to the type of activity, ranging from



(3 m) from the learner's performance while performing the skills for each learner, three attempts for each skill.

### **3-6-5-Implementation of the educational curriculum:**

The educational curriculum was implemented on 2/7/2022 from Sunday until 3/17/2022 under the direct supervision of the researchers with the assistance of experienced sign language interpreters at the Amal Institute for the Deaf and Mute in Qadisiyah. The implementation of the educational curriculum took (4) weeks, with (8) educational units for each study group, divided into two educational units each week for the control group, which was assigned two educational units each week on (Saturday and Monday), and the experimental group was assigned two educational units each week on (Sunday and Tuesday). The educational curriculum prepared by the researchers was implemented for a time of (45) minutes for each educational unit.

Divided into the following:

- Preparatory section:

Its duration is (10) minutes and includes the introduction, general warm-up, and physical exercises that serve the basic skills of the skills under study.

- Main section:

Its duration is (30) minutes and aims to learn the technical steps for each of the basic skills (under study) in addition to providing a number of exercises necessary to develop its specific skill. It has been divided into:

A- Educational section:

Its duration is (5-10) minutes, in which the basic skills under study are explained and translated into sign language for each group according to the application by a sign language interpreter.

B- Application section:

Its duration is (10-15) minutes and aims to provide an opportunity for all students to apply what they have learned from the skill in the educational aspect through a set of varied exercises.

**3-6-5-3- Closing section:** Its duration is (5) minutes, in which a number of recreational exercises are given and corrective feedback is given, then the departure greeting is performed and the unit is ended

#### **3-6-4- Pre-tests:**

The pre-test was filmed and the selected tests were applied on 5-6/2/2022 in the sports field of the Amal Institute in Qadisiyah with the help of the assistant work team.

#### **3-6-6- Post-tests:-**

The post-tests of the selected skills were conducted on 18-19/3/2022 after the completion of the application of the educational curriculum vocabulary to the research groups. The tests were photographed in the same place and conditions in which the pre-tests were applied in the presence of the assistant work team.

**3-7 Statistical methods:-The researcher used the statistical package (SPSS) to extract the research results.**

### **4- Presentation and discussion of the results**

#### **4-1 Answering the research hypothesis that states:**

There are statistically significant differences between the pre- and post-tests of the experimental and control groups of deaf and mute students in the readiness stance and some leg movements with the foil weapon in fencing

The researchers collected the data and entered it into special forms and processed it statistically. The results listed below appeared.

Table (3)

shows a comparison of the students' performance level in the skills tests for the research topic in fencing sport

using the comparative competition method (pre- and post-tests) for the experimental group

Skills Ready stance.	Experimental group		Control group		T Calculated
	$\bar{x}_s$	$a_{\pm}$	$\bar{x}_s$	$a_{\pm}$	
Ready stance.	4.1	0.331	8.252	1.133	3.976
Forward movement.	3.2	0.457	7.63	0.863	4.321
Backward movement.	3.4	0.821	7.26	1.613	5.035

Table T value (1.86) at error rate (0.05) and degree of freedom (9)

It is clear from Table (3) the following:

The value of (T) calculated by the skills (readiness stance and leg movements) reached (3.976, 4.321, 5.035) respectively. While the value of (T) table reached at degree of freedom (9) and error rate (0.05). Since the value of (T) calculated was greater than the table value, this means that there is a significant difference

between the pre- and post-tests. From reviewing the arithmetic means, it is clear that the difference is in favor of the post-test.

Table(4)

shows a comparison of the level of students' performance in the skills test for the research topic in the sport of fencing using the comparative competition method (pre- and post-tests) for the control group

Skills Ready stance.	Experimental group		Control group		T Calcul ated
	$\bar{x}_s$	$a_{\pm}$	$\bar{x}_s$	$a_{\pm}$	
Forward movement.	3.4	1.435	6.231	2.153	3.011
Backward movement.	2.9	1.325	6.086	0.393	4.56
Skills	4.2	0.535	6.883	2.031	2.962

The value of the (t) table is (1.86) at an error rate of (0.05) and a degree of freedom of (9).

The value of the (t) calculated for the skills (readiness stance and leg movements) was (3.011, 4.56, 2.962) respectively, while the value of the (t) table at an error rate of (0.05) and a degree of freedom of (9) was equal to (1.86).

Since the value of the (t) calculated was greater than the value of the table, this indicates that there is a significant difference between the pre- and post-tests, and by reviewing the arithmetic means, it becomes clear that this difference is in favor of the post-test.

Table (5)

shows a comparison of the level of students' performance in the skills test for the research topic in the sport of fencing using the comparative and imperative competition method (post-test) for the two groups

Skills Ready stance.	Experimental group		Control group		T Calcul ated
	$\bar{x}_s$	$a_{\pm}$	$\bar{x}_s$	$a_{\pm}$	
Forward movement.	8.252	1.133	6.231	2.153	1.943
Backward movement.	7.63	0.863	6.086	0.393	2.020
Skills	7.26	1.613	6.883	2.031	1.972

Table value (t) (1.75) at error rate (0.05) and degree of freedom (15)

The calculated value of (t) for the skills (readiness stance and some leg movements) was (1.943, 2.020, 1.972) respectively, while the table value of (t) at error rate (0.05) and degree of freedom (18) was equal to (1.72).

Since the calculated value of (t) was greater than the table value, this indicates the presence of a significant difference between the pre- and post-tests. By comparing the arithmetic means, it becomes clear that this difference is in favor of the post-test for the experimental group.

From the above tables, it is clear that there are significant differences between the pre- and post-measurement in favor of the post-test in the test prepared for the selected basic skills, which confirms the effectiveness of the educational curriculum prepared by the researchers in sign language for the selected and specific vocabulary that is commonly used in the field of learning basic motor skills. This confirms that descriptive sign language was effective in conveying information and correcting errors for sports skills in fencing that can be easily learned by learners, especially in the sports field, due to the similarity of the use of descriptive signs with the signs used by the physical education and sports teacher to a large extent, because the physical education and sports teacher uses hand signs a lot in the field of education and explanation. This feature helped teachers a lot in teaching sign language well, as (Abdul Mutalib Al-Quraiti 2005) indicated that sign language is a system of manual symbols and formed movements or images in which hand movements and expressions of arms and shoulders are used to describe words, concepts, ideas and events that respond to it or want to express it. It is noted during the application of the method that there are some common mistakes that most students make, including the wide movement of the legs and their distance from the opponent's blade, which makes them lose the element of surprise, and performing the movement from the shoulder joint, performing the step movement and not focusing on the position of the armed arm, as well as not using the working fingers to direct the fly forward in a proper manner. However, the researcher found that the comparative competition method had a significant positive effect on learning skills because it provided the opportunity for learners to discover the strengths and weaknesses in their performance, which helped them and created in them a spirit of determination and self-confidence to reach the ideal performance of the movements.

5- Chapter Five Conclusions and Recommendations.

### 5-1 Conclusions:

- 1- There is a clear effect of the comparative method in teaching the ready stance and some leg movements in foil fencing for hearing impaired students.
- 2- The skill of the ready stance was better in terms of learning than the rest of the selected skills.
- 3- The comparative method had an effect in teaching the selected skills

### 5-2 Recommendations

- 1- The necessity of applying the comparative teaching method as one of the modern teaching methods in teaching foil skills to the disabled (deaf and dumb).
- 2- Using performance photography in physical education curricula for the disabled in various activities that are dominated by the applied aspect of motor skills
- 3- The necessity of conducting other research and studies using other educational methods in teaching the disabled.

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Appendix (1)  
Performance Evaluation Form

NO	.Standby				Moving .forward			.Step back			the total
	1	2	3	4	1	2	3	1	2	3	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											