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The effect of the dienes model on the learning of the simple attack and stabbing skills in fencing for students

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Abstract

This paper aims to prepare educational units based on the Dienes model for students to learn how to stave and attack simply, as well as to determine the model's effect on students' acquisition of these abilities over time. In order to accomplish the goals of the study and validate its hypotheses, The investigator utilized the experimental technique by creating two equivalent groups one for the experiment and the other for the control using testing before and after. The third-year students at the Faculty of Physical Education and Sports Sciences at the University of Kufa have been picked by the researcher as the research community During the current school year (2024-2025), sixty-two students were allocated. into two sections, namely (B, C), with (34) students for Section (B) and (28) students for Part (C). The sample was chosen at random by a lottery and split into two groups: Section (B), the first control group, which operates in accordance with the subject's methodology teacher, numbering (20 students), and the second experimental group, Section (C), works according to the model prepared by the researcher, numbering (20) students, representing a percentage of (32.25%) of the original community for each group, as (7) were excluded due to their large number of sick leaves, and (15) 24.19 percent of the research community were students for the exploratory project. Among the researcher's most significant findings is that: Members performed better than those in the control group, and the experimental group Dienes model had a favorable impact on the research sample's acquisition of stabbing and basic attack abilities members in (the skills of stabbing and simple attack).

Keywords: Educational units, dienes model, staving and attacking skills, experimental technique

Introduction

Overview

It has become difficult for those in charge of the educational process and students to create more active and successful teaching models that align with their cognitive capacities, since many educational theorists think that today's pupils are different from yesterday's. learners due to their significantly improved mental abilities in recent years control the swift changes in life and its growing demands, aiming to motivate students to reflect and conduct research in order to attain the intended stage (S. A. Mehdi, A. A. Kadhim. 2019) ^[11]. Therefore, The teacher's job has evolved beyond simply imparting knowledge; he is now also in charge of helping students develop their personalities and broaden their horizons on their own. The process of education is among the most significant and essential procedures that contribute to teaching, mastering and developing performance according to advanced scientific foundations. Therefore, those in charge of this process have turned to finding various models to develop it in the various stages of learning, and the constructivist theory is one of the most important of these sources that provide us with these modern educational models. By using modern teaching methods, the Dienes model was used. The Dienes model is one of the teaching models that are based on the constructivist theory Depending on how the student interprets events and how well he understands them in light of prior knowledge, which seeks to support students to develop their levels and keep them away from inactivity and boredom and find the best link between theoretical materials and their practical application.

The Dienes model is represented by a series of exercises and protocols carried out by the instructor by letting the pupils play freely and then instructing them to look for the common characteristics of athletic abilities (S. A. Mehdi, A. A. Kadhim, 2020) ^[12].

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Fencing is one of the games that requires a variety of offensive and fundamental skills, which the teacher or trainer is required to teach and communicate to learners and develop them well in order to raise their skill performance, and this is done by using appropriate and suitable strategies and models. Hence, the importance of the current research comes as it is a scientific, theoretical and applied attempt to use an educational model from the constructivist theory models (Dienes model) that may help students overcome situations and accelerate their education to reach the desired results and develop them. Through our study, we will see the importance of this method in gaining some fundamental and combative abilities in the sport of fencing, and the extent of its contribution to enriching the teacher with the practical method through which he can ensure the success of the educational process and stay up to date with the development of teaching basic and offensive skills to students.

(Hashem, Al Edhary, Radhi, & Hmeid, 2022) ^[14] (Jerri, Radhi, & Oleiwi, 2024.) ^[15] (Radhi & Obaid, 2020) ^[16].

Research problem

Those interested in teaching methods and techniques have confirmed that teaching is A collaborative effort between the educator and the student, and that it is characterized by give and take and constructive dialogue between them, and because fencing is one of the sports where a variety of skills are essential for the best possible performance, which students should acquire, hone, and master. Based on the researcher's observations, the research problem was found to be the variation in the degree of learning of certain offensive and basic skills. It became evident that despite the efforts and challenges, pupils have challenges when mastering certain offensive and fundamental skills The topic teacher's attempts to help them learn better.

Therefore, as a scientific attempt to change performance to good (ideal) performance by using educational units to increase students' activity, the researcher chose to shed light on a constructive educational model, the (Dienes) model, and use it to know its effect on the research sample. toward education and make them the primary emphasis of switching from the used approach to a more efficient and exciting method.

The purpose of the study

- Creating instructional materials based on the Dienes model to teach pupils how to stab and launch a basic attack.
- Determining how the Dienes model affects pupils' acquisition of stabbing and basic attack techniques.
- Determining the superiority of the effect of the Dienes model and the teacher's approach based on the post-test results regarding students' acquisition of stabbing and simple attack skills.

Research theories

- The Dienes model has an impact on students' acquisition of stabbing and basic attack abilities as well as their performance on post-tests.
- The effect of the Dienes model and the teacher's approach is superior in terms of the experimental group's performance on tests measuring students' acquisition of stabbing and basic attack abilities.

Domains of research

- **Human field:** University of Kufa Students in their third

year at the Faculty of Sports Sciences and Physical Education.

- **Time frame:** March 10, 2024, to February 13, 2025
- The Faculty of Physical Education and Sports Sciences at the University of Kufa closed fencing hall serves as the spatial field.

Definition of terms

Dienes model: It is a collection of productive exercises carried out by the instructor to give students unrestricted practice and active play and to direct them to search for the common characteristics of sports skills. (Mays Muhammad Jabr. 2023) ^[11].

Methods of research and fieldwork

Methods of Research

To accomplish the research goals and validate the hypotheses, By establishing two identical groups experimental and control with pre- and post-tests, the researcher used the experimental technique. In order to understand the instant changes that take place and attempt to explain and interpret them within a rigorous scientific framework, experimental research involves the researcher purposefully altering specific elements. basis," the researcher explained" (Wajih Mahjoub. 1993) (Ashwaq Auda Kadhim, Sadiq A. Mehdi. 2022) ^[13].

Community and sample research

The third-year students in the University of Kufa's Faculty of Physical Education and Sports Sciences have been picked by the researcher as the research community for the current academic year. (2024-2025), numbering (62) students distributed into two sections, namely (B, C), with (34) students for Section (B) and (28) students for Section (C). Regarding the sample, it was chosen at random using a lottery. and divided into two groups: the first control group, Section (B), works based on the approach the subject took teacher, numbering (20 students), and the second experimental group, Section (C), works according to the model prepared by the researcher, numbering (20) students, representing a percentage of (32.25%) of the original community for each group, as (7) were excluded due to their large number of sick leaves, and (15) 24.19 percent of the research community were students for the exploratory project.

Table 1: Shows the samples used in the research

Research sample	Number	Percentage
Research community	62	100%
Control group	20	32.25%
Experimental group	20	32.25%
Experimental sample	15	24.19%

The uniformity of the study sample groups

Uniformity

The researcher Measurements of height, weight, and age were made in order to achieve homogeneity in the research sample. The skewness coefficient was then computed for these variables as part of statistical treatments, as shown in Table (2).

Table 2: Illustrates the uniformity of the sample individuals

Factors	Unit of measurement	Mean	Standard Deviations	Median	Skewness	type sig
Length	Cm	176.56	4.89	176	0.34	homogeneity
Mass	Kg	64.52	5.95	64	0.26	homogeneity
Age	Year	19.73	1.98	20	-0.41	homogeneity

Methods used in field research

Identifying the variables under investigation

- Stabbing skill.
- Simple attack.

Measurements and tests employed in the study

Tests of research variables

Description of the stabbing and simple attack skills test

The performance of the stabbing and simple attack skills was evaluated according to a standardized form in fencing and approved in previous studies (Hadeer Falah Abdul Sahib. 2019), and the performance evaluation is based on the parts of the movement and its manifestations by photographing the skill and presenting it to three experts and a score of (1-10) is given, as the skills were performed in front of the teacher as in Appendix (3).

Investigative test

On Tuesday, 21/01/2025, the researcher performed the exploratory experiment on 15 students who were not part of the primary research sample but were members of the research community. The exploratory experiment's goal was:

1. Verify that the sample members understand the test instructions.

2. Be aware of how long the research tests will take.
3. Verify the reliability of the instruments and equipment utilized in the study.
4. Recognize potential application process challenges so that they can be avoided when implementing the tests in the primary experiment.
5. Teach the support staff how to conduct the exams and document the outcomes.
6. Identify the possibility of applying the exercises that have been prepared.

Key Experiment Protocols

Prior to tests

For the two groups (control and experimental), the researcher administered pre-tests to the research community for the study variables on 23/1/2025, in the fencing hall.

There is no difference between the two research groups

In order to attribute the differences in the post-test results for the variables under investigation to the influence of the experimental factor, the researcher employed the (t) test for independent samples to verify the equivalence of the two groups, as shown in Table (3).

Table 3: The control and experimental study groups' equivalency is displayed

Variables	Measuring unit	Control		Experimental		T value calculated	Level Sig	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Stab	degree	5	0,89	4,5	1,04	0,889	0,395	Non sig
Straight Attack	degree	5,33	0,81	5,83	0,7	1,103	0,296	Non sig
Attack with a change of direction	degree	4,66	1,03	3,83	0,75	1,597	0,141	Non sig
Cutting Attack	degree	4,17	1,16	3,5	1,04	1,040	0,323	Non sig

From Table (3) makes it evident that the test significance level (sig) is the highest value of the significance level (0.05), and as a result, the test significance is not significant for any of the variables being examined. 3-6-3 Application of educational units (stages of the Dienes model):

The experimental research group's students were subjected to the experiment on 26/1/2025 in the fencing classroom at a rate of 10 units per week for 90 minutes over ten weeks, while the control group studied in accordance with the educational approach that the subject teachers had chosen and were using until the experiment's conclusion on 3/30/2025. The vocabulary of the educational content was incorporated into the educational units through the design of instructional strategies to deliver the material, which also included the model's vocabulary and its features that support students' learning and then instruct them based on their aptitudes and traits., as well as employing exercises with suitable repetitions and instructional resources based on the learners' characteristics and requirements in order to study and acquire the cognitive and skill components of the practical educational units. The following procedures were followed by the researcher when conducting the experiment: -

The educational curriculum consists of ten educational units, with one unit being completed each week. Each unit lasts for ninety minutes, and the group's work is divided As follows:-

1. **Preparatory section (20) minutes:** In which the warm-up and work organization are done for each of the research groups
2. **Main section (60) minutes:** The work of the groups was as follows:

Experimental group: Which implemented the curriculum in accordance with the Dienes model and consists of the following parts:-

- **The learning part:** Its duration is (20) minutes, and in it the students' tendencies towards learning the skill are aroused by asking some questions and displaying pictures of the skill through the display screen. The educational part includes two stages of the Dienes model, which are:-
 - **The free play stage:** In this stage, the teacher asks some questions about the skill to be learned and finds out if the students have any idea about that skill so that the teacher knows the extent of their knowledge of the skill concerned with the study. In this stage, the students are exposed to some information related to the skill to be learned through sensory objects in order to stimulate the mental processes related to the skill. The student imagines the skill of stabbing, for example, through free play for some components of the idea about the skill concerned with the study. A video is also shown to them to teach the skill of stabbing.
 - **Guided play stage:** In this stage, the teacher gives the student tasks that provide him with experiences to build the concept, so he learns to give some exercises to the students and form them into small groups. Here, the student is exposed informally through play, but with activities, i.e. different exercises, but with a colleague, for example: giving the skill of stabbing on signs once during normal progress and once during jumping, which helps the student learn faster through repetitions and is more organized.
- **Applied part:** which lasts (40) minutes, and includes the

Dienes model's three phases, which are: -

- **The phase of looking for shared characteristics:** The instructor brings the class together and invites them to explain the concepts and ideas they came to by applying the performance from the previous stage. The instructor then provides explanations to address the issues and errors they made by including potential fixes or corrective responses in performing the skill, and then the teacher can find many common properties among the students through their performance of the skills.
- **Representation stage:** This stage consists of exercises given to the student by the teacher, and the exercises serve the skill to be learned, i.e. the exercises represent the skills.
- **Coding stage:** Students begin to reapply the skill and correct errors through feedback based on what the teacher

sees as correcting the errors they made, so that they can perform the skill correctly, according to the sequential stages that were explained to them through the skill presentation tool.

- The final part: Its time is (10) minutes, which includes the last stage of the Dienes model, which is:-
- **Abstraction stage:** The teacher tests the students in performing the skill they learned according to its stages (preliminary, main and final) in order to identify the level the student has reached in implementing the skill so that they can identify the problem, if any, in learning the skill. The evaluation time was (10) minutes, i.e. this stage is evaluative, and Table (4) shows the total time for each educational unit and the entire duration of the curriculum as prescribed.

Table 4: Shows The educational unit's sections

Sections of the educational	Lesson Activity Contents	Activity time during the unit
Preparatory section 20 minutes	Introduction	5 minutes
	General Warm-up	5 minutes
	Specific Warm-up	10minutes
Main section 60 minutes	Educational	20minutes
	Applied	40minutes
Final section 10 minutes	Assessment Tests	10minutes
total		90 minutes

- The control group was taught the skills (stabbing - simple attack).
- The experimental group was taught the skills (stabbing - simple attack).
- The subject teacher explained the skill and presented it well and clearly to assist in determining the proper form of the skills and how to execute them in the control group using the teacher's technique.
- Under the researcher's guidance, the subject teacher, used the stages of the Dienes model in the main section (the educational section of the lesson and the practical section of the lesson) and the final section and answered the students' questions during the presentation.
- When the experimental group faces any difficulties or inquiries, it is possible to refer to the subject teacher to clarify and solve the problems.
- The subject teacher monitors and follows up when the two groups perform the skills assigned to them to achieve order and calm.
- The days of the educational unit are Sunday.
- Upon completion of each educational unit, tests are conducted on the skills or assignments that were implemented during the lesson. This is another educational method that informs each student of the level

he/she has achieved and provides him/her with experiences that enable him/her to learn the characteristics, concepts and principles related to the skills to be learned. It also helps to reveal strengths and weaknesses in performance.

After-tests

After finishing the application of the educational units (stages of the Dienes model), the researcher conducted the post-tests for the research community on Monday, 13/2/2025, with assistance from the assistant staff. Regarding the order of tests, the researcher considered the identical circumstances under which the pre-tests were administered.

Methods of statistics: The Statistical Package for the Social Sciences (SPSS) was used to process the search data.

Findings and conversation

presentation of the pre- and post-test findings for the variables being studied in the control and experimental groups

The arithmetic means and standard deviation of the control group's pre- and post-test findings for the variables are displayed in Table (5). under study

Table 5: The arithmetic means and standard deviation of the control group's pre- and post-test findings for the variables are displayed

Variables	Measuring unit	Pre-test		Post-test		T value calculated	Level Sig	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Stab	degree	5,0000	0,89443	7,0000	0,63246	5,47	0.003	Sig
Straight Attack	degree	5,3333	0,81650	7,0000	0,63246	7,9	0.001	Sig
Attack with a change of direction	degree	4,6667	1,03280	7,0000	0,63246	7	0.001	Sig
Cutting Attack	degree	4,1667	1,16905	6,8333	1,16905	4,78	0.005	Sig

The arithmetic means and standard deviation Table shows the pre- and post-test findings for the variables being studied for

the experimental group (6).

Table 6: Shows the pre- and post-test findings for the variables being studied for the experimental group

Variables	Measuring unit	Pre-test		Post-test		T value calculated	Level Sig	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Stab	degree	4,5000	1,04881	8,1667	0,75277	5,5	0,003	Sig
Straight Attack	degree	5,8333	0,75277	8,8333	0,75277	11,61	0,000	Sig
Attack with a change of direction	degree	3,8333	0,75277	8,8333	0,75277	13,69	0,000	Sig
Cutting Attack	degree	3,5000	1,04881	9,0000	0,63246	12,84	0,000	Sig

The arithmetic means and standard deviation of the Results of the post-test for the variables being studied in the experimental and control groups are displayed in Table (7).

Table 7: The Results of the post-test for the variables being studied in the experimental and control groups are displayed

Variables	Measuring unit	Control		Experimental		T value calculated	Level Sig	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Stab	degree	7	0,6	8,16	0,75	2,907	0,016	Sig
Straight Attack	degree							Sig
Attack with a change of direction	degree	7	0,63	8,83	0,75	4,568	0,001	Sig
Cutting Attack	degree	7	0,63	8,83	0,75	4,568	0,001	Sig

Discussion of the results

Through The effectiveness of using the Dienes model The researcher attributes the variations between the experimental group and the control group in the results to the planning and execution of educational units, which made it easier for the participants to comprehend and assimilate the skills covered in its three sections (preparatory, main, and final). shown in the previously mentioned tables (5 and 6). in addition to the fact that the students' performance clearly improved as a result of the novel educational scenarios they encountered, which differ from the conventional instructional units in that they are characterized by the lucidity of the objective and the tasks that the students must complete.. This is what (Fouad Suleiman Qalladah. 1989) [4] showed: "The goals' clarity and their definition in relation to particular behaviors or performance levels make them meaningful and effective, as Their understanding of the educational content was impacted by the interactions and fruitful discussions among members of the same group over the educational activity they were undertaking".

When learning stabbing and simple attack skills, Because the Dienes model was applied and the student was given adequate time to learn in accordance with his own capacities, the experimental group did better than the control group. Additionally, students can employ a variety of senses while learning thanks to the manner the instructional content is delivered, whether it be through written text, still and moving images, or video clips. process, which effectively contributes to the diversity of knowledge sources and increased opportunities for good learning. In addition to using a variety of exercises and ongoing guidance from the subject teacher on how to complete them, which reduced the mistakes that students might make when completing the exercises in the educational unit. This improvement in technical performance and accuracy of the skills learned came about as a result of teaching differently by using the Dienes model, which helps to put students at the center of the learning process and arranges their performance in accordance with the model's stages.

Additionally, the Dienes model's stages featured a range of instructional strategies, such as debate, discussion, cooperative learning, and brainstorming, which assisted students in applying a range of cognitive abilities and learn how to participate in performance (practical application),

respect other people's opinions, and work in organized cooperative groups. These techniques made students eager to help one another and made learning exciting and creative, as well as the variety of instructional resources and activities, including images, summaries, and researcher-prepared exercises, which resulted in a noticeable improvement in the technical proficiency and precision of the skills examined. Teaching the skills of stabbing and simple attack according to the Dienes model helped to attract the attention of students. The researcher attributes the emergence of these results for the experimental group learners to the suitability of learning according to the Dienes model in increasing interaction between learners by including what helps in cohesion between them through group exercises directed towards educational goals and educational and behavioral goals and the sufficiency of these exercises and the number of times they were performed, which worked to increase positive activity to reach sound skill learning with this interaction and cooperation between them. The reason for this superiority is The efficiency of the independent variable represented by the Dienes model, which emerged from the constructivist theory, which Karam Abu Athrah (2010) [5] sees that constructivism is "the learner's reliance on his previous experiences and knowledge in order to build new knowledge in the presence of a facilitating and assisting teacher to build knowledge, by carrying out activities and the strategies he uses in the educational situation, and encouraging them to produce multiple interpretations so that learning becomes meaningful to them" (Karam Abu Athrah. 2010) [5]. Constructivist education is based on an important principle, which is to design teaching and educational strategies and practices that focus on the learner, and diagnose the student's previous experiences and link them to new learning to build the required knowledge (Nadia Hassan Al-Afoon and Hussein Salem Makoun. 2012) [6].

The researcher also sees the explanation for why the experimental group outperformed the control group in the students' simple fencing and attack skills due to the effectiveness of the Dienes model and his philosophy of constructivist theory, which has the advantage of helping to increase the learner's motivation towards the skill due to the positive interaction between the learner and his peers on the one hand and between the learner and the skill technique and the teacher on the other hand. This is the opposite of the

method followed, which is concerned with the learning material (stages of technical performance of the skill) and gives them priority. Here, the teacher has a fundamental role in the method followed, and the learner's role is a passive role, receiving ready-made information from the teacher and not making an effort to access that information. While the researcher finds, through the use of the model, that knowledge is actively built by the students themselves by incorporating fresh knowledge, firsthand accounts, and constructive criticism, making learning here more significant to them. In this context, (Yousef Qatami. 2013) ^[7] affirms that learning is a continuous, active, and intentional process that involves mental work and that learning happens as the learner adds new information or develops existing knowledge. It also states that "The constructive learning strategy gives the learner better opportunities to participate effectively in the educational process, as learners show enthusiasm and drive towards working to learn." (Sam Al-Shantawi and Hani Al-Ubaidi. 2006) ^[8].

As for the improvement in the control group's skill performance, the instructor's teaching strategy required the students to follow the motor model, repeat it repeatedly, and not stray from it until they are able to perform the skill in a manner similar or identical to the model. This means not performing operations that help in the abundance of ideas, as it does not move the mental processes in them, as focusing on a specific response makes the students unable to provide new solutions and they find it difficult to change ideas, "as the student who stops at a specific idea or is rigid in the face of a method is less capable of creativity than the student with flexible thinking who is able to change when necessary" (Sunal, D. 2004) ^[9]. This led to the development not occurring in the required manner. The researcher credits this to the topic teacher's experience and manner, or his own approach to teaching by clearly showing the skill and applying it and providing a thorough explanation of the material. Thus, employing the model and the technique in question helped pupils become more proficient in stabbing and basic assault techniques in fencing. The researcher thinks that the growth that took place in the control group, which was then followed by the instructor, helped the pupils learn how to stab and launch a basic attack in fencing. This is congruent with "assisting the student in acquiring knowledge, skills, and experiences in a scientifically researched and appropriately planned manner by placing him in situations, or educational atmospheres to provide the effective environment to achieve the best performance. (Muhammad Hasan Amaira. 2002) ^[10].

Conclusion and Recommendations

Remarks

- The research sample members benefit from the Dienes model in terms of learning how to stab and launch a basic attack.
- Members of the experimental group performed better than those in the control group in terms of stabbing and basic attack skills.
- By giving the teacher both general and detailed information on the pupils, the Dienes model improved time management and helped the teacher use the teaching design.
- By monopolizing the traditional approach and altering the reality in which students live, the Dienes model of learning encouraged students to actively participate in their education.

Suggestions

Based on the findings of the present study, the investigator suggests the following:

- Work on structuring the study material's content using an instructional design in a way that meets and accomplishes the established learning objectives, as well as the phases of the Dienes model.
- Using the Dienes model is necessary during learning to avoid boredom among students and provide them with intrigue and excitement in addition to its beneficial impact on the educational process.
- Using the Dienes model on students in other activities.
- Conducting similar studies on females to find comparisons between males and females in the Dienes model in interactive thinking and learning skills in fencing.
- Emphasizing those in charge of the educational process to hold continuing education courses for physical education teachers to update their information about modern teaching strategies and methods that are in line with scientific progress.
- Conducting similar studies on other skills in fencing other than those used in the research.
- Conducting comparable research on samples other than the research sample.

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Appendix (1)
Names of experts who were interviewed personally

Academic Title	Name	Specialization	Affiliations
Professor Doctor	Mohammed Yasser Mahdi	Kinesthetic Learning / Basketball	Faculty of Physical Education and Sports Sciences, University of Kufa
Professor Doctor	Khaled Shaker	Kinesthetic Learning / Handball	Faculty of Physical Education and Sports Sciences, University of Kufa
Professor Doctor	Essam Taleb	Training / Fencing	Faculty of Physical Education and Sports Sciences\University of Babylon
Assistant Lecturer	Mohammed Saheb	Teaching Methods / Fencing	Faculty of Physical Education and Sports Sciences, University of Kufa

Appendix (2)
Names of the support team

No.	Name	Specialization	Affiliations
1	Assistant Professor Doctor Mahmoud Nasser Radhi	Physiology/Volleyball	Faculty of Physical Education and Sports Sciences, University of Kufa
2	Assist. Professor Sajjad Kafah	Motor Learning/Fencing	Faculty of Physical Education and Sports Sciences, University of Kufa
3	Assist. Professor Mohammed Sahib	Teaching Methods/Fencing	Faculty of Physical Education and Sports Sciences, University of Kufa
4	Assist. Professor Asmaa Hazem	Learning/Fencing	Faculty of Physical Education and Sports Sciences, University of Kufa

Appendix (3)
Fencing Performance Evaluation Form
Laboratory Name

Skill	Performance fluidity and consistency			Performance timing			Preparatory section			Main section			Final Section			Total of 10 degree
	degree			degree			degree			degree			degree			
	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	
Stab																
Straight Attack																
Attack with a change of direction																
Cutting Attack																

Appendix (4)
Exercise model prepared by the researcher according to the Dienes model and applied to the research sample in the development units

- **Educational objective:** Teaching the skill of challenge.

- **Number of students:** 30 students.
- **Behavioral objective:** Accustoming students to teamwork.
- **Total time:** 90 minutes.

Unit Sections	Time (minute)	Educational Activities	Shapes	Notes
Preparatory Section	10	General warm-up/ jogging around the field for ten laps - front lunge - jogging with arm movements in all directions - jogging from a standstill		Video camera, display screen and siren indicators.
	Special warm-up 10	(Standing - arms open to the side) Close and open the arms and legs for 8 reps (Standing - arms in front) Running from a standstill... 8 reps (Standing - arms in a lateral flexion position) Bend and extend the arms for 8... reps		
Main Section	60	The first stage is the free play stage: In this stage, the teacher asks some questions about the stabbing skill and finds out if the students have any idea about that skill so that the teacher knows the extent of their knowledge of the skill in question for study. The questions are: How is the movement of the armed hand when stabbing? How to maintain the body's balance when stabbing? When is the stabbing skill used? Where is the gaze when stabbing? In this stage, students are exposed to some information about the stabbing skill through sensory things such as giving them weapons for the purpose of feeling the movement in order to stimulate the mental processes related to the skill. The student imagines the stabbing skill through free play. A video is also shown to teach the stabbing skill after the teacher explains the skill. The second stage is the guided play stage: The teacher begins to apply the stabbing skill with the students, as the teacher directs the students to the correct way to perform the skill through exercises prepared by him, giving the stabbing skill between three signs once while walking and once while running helps the student learn faster _ Stabbing in front of a mirror		
Educational Section	20			
Applied Section	40	The third stage is the stage of searching for common properties: This stage comes when the student understands the correct and final idea for applying the skill of stabbing compared to the ideas he formed in the previous two stages and they all become meaningful. In this stage, the teacher gives many exercises by dividing the students into two groups The fourth stage is the stage of acting: In this stage, the teacher gives several exercises that serve the skill, Stabbing from a stationary position Stabbing from movement		
		The fifth stage is the stage of coding: This stage is considered as feedback for the students by showing their common mistakes and correcting the performance. An explanatory video is shown to them showing them the most prominent mistakes and the correct technical method of performing the stabbing.		
Final Section	10	The sixth stage is the abstraction stage: This stage is considered an evaluation stage for students to know the validity of the previous steps and to evaluate the students' activity and technical performance of the skill. Then a small game is held for the purpose of entertainment, after which the students stand in one line for the purpose of performing the sports salute and leaving.		