



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2024; 9(1): 13-20

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[www.theyogicjournal.com](http://www.theyogicjournal.com)

Received: 17-11-2023

Accepted: 25-12-2023

Publication: 24-01-2024

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## An educational curriculum according to Bybee model of motor satisfaction and its effect in teaching students the accuracy of lunge with a foil

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**DOI:** <https://doi.org/10.22271/yogic.2024.v9.i1a.1515>

### Abstract

One of the individual sports where there are a lot of fundamental offensive and defensive abilities is fencing. She therefore requires an educational paradigm that considers training her fundamental abilities, particularly the ability to lunge and attain mastery. Therefore, the research's use of the Bybee instructional model is crucial in helping students acquire the precision of lunging with a foil and improve their motor pleasure. The purpose of the study was to determine how instructional units based on the Bybee model affected students at Al-Qadisiyah University's College of Physical Education and Sports Sciences' ability to lunge accurately and with motor pleasure. Based on the researchers' expertise in this area, it was discovered that there is a deficiency in the use of techniques and models for motor skill acquisition and application. The field of teaching involves providing students with hands-on lessons to develop their motor skills and learning, with a direct focus on the teacher and their participation. An experimental design with two equal groups was employed, and the 150 third-year students enrolled in the College of Physical Education and Sports Sciences for the academic year 2022–2023 were identified as the research population. The research sample consisted of (40) students total, with (20) individuals in each group following some students' exclusion for various reasons. It was chosen using a straightforward random approach. Following that, the two groups in the pre-test underwent homogeneity and equivalency tests, followed by the application of the main experiment and the subsequent administration of the post-test. The research's data were accessed using a variety of statistical techniques, and the findings were then debated and shown.

**Keywords:** Bybee model, motor satisfaction, lunge with a foil

### Introduction

Scientific development in the sciences of physical education today has become like the rest of the various sciences, which depends primarily on study, research and investigation in order to keep pace with development and modernity, which undoubtedly works in the development of sports performance, which is the focus of thinking of those working in this field. Therefore, the search is for educational methods and methods that mimic developments and modernity in the learning process and good skill performance, which leads the individual athlete to high achievement.

Today, we see that the physical education lesson is the basic pillar and backbone of the skill learning process and brings the student or player to learning the minutes and parts of sports skills or movements. It undoubtedly contributes to improving the skill and motor performance of the learners, especially beginners in the game, thus providing them with basic skills, which is the first step. To acquire the learned skills, which work to provide the learner with the experience and skill necessary to practice and apply various sporting activities, both through training to participate in sports competitions and tournaments, which are the main focus of sports competition and in which the athlete's performance is demonstrated. Nowadays, we find that the task of the teacher today is not limited to explaining, delivering, and following traditional methods and models (followed) in student learning. Rather, his primary responsibility has become to draw a plan for a strategy for learning skills using modern

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methods and models to reach the highest mathematical levels. One of the most up-to-date and useful models in the contemporary educational process is the Bybee model. In addition to helping students acquire information and skills, this kind of learning aims to build contemporary teaching strategies for the motor learning of skills. Because this learning model teaches students that prior knowledge is a prerequisite for constructing new knowledge, it gives them a role by encouraging them to be more proactive and positive. Accordingly, Bybee's model focuses on the students' preexisting cognitive structures.

One of the most important elements of the psychological component is motor satisfaction, which is how the student displays his happiness with every result he achieves and affects his performance level to improve. Reaching the objective, succeeding in any sporting endeavor, and making development in it all depend on paying attention to the psychological component, which is one of the crucial factors that directly influences sports performance. Findings that include an increase in motor pleasure also promote kids' self-esteem by increasing their belief that they can be successful athletes. Furthermore, when someone is satisfied with their performance, they are more likely to love and desire to pursue that activity going forward, which will assist them in achieving their goals.

Fencing with a foil is a significant activity that demands extreme focus, attention, and precision in addition to caution. It also has a higher technical performance standard than some other individual sports.

The research is significant because it supports the use of a Bybee model-based educational curriculum that offers suitable learning opportunities through the best use of time and effort to achieve learning that impacts students' motor satisfaction and foil lunge performance.

### Research Problem

Fencing is one of the sports that most college students have never participated in, according to the researchers' observations and experiences with the activity. Many of them had never seen a single match in their lives, which made learning challenging at first and necessitated additional repetition in their daily lives. Performance, particularly since the skills required for the foil are ingrained from the start, and the approaches and techniques used to acquire these skills frequently rely on the conventional approach (the imperative method), which frequently ignores the individual differences among students and fails to produce motor satisfaction - a student's sense of fulfillment with his skill movements. Picking a new educational model was a crucial step that the researchers took since it affected the physical aspect of learning, which is connected to motivation to do the activity and results in a deficit in acquiring these abilities. This is what made them decide to give the Bybee model a serious go in an effort to improve upon the previous model's educational outcomes and guarantee that pupils were acquiring skills that were suitable for their age. The researchers used The Bybee approach to teach foil skills as a result of this. Numerous sources have confirmed that this model works to improve students' mental and motor skills, which improves their psychological well-being and performance level. It also uses research findings to support the field's educational and teaching processes.

### Research Objectives

1. Preparing an educational curriculum according to Bybee's model of motor satisfaction and learning the accuracy of lunge with a foil for students.
2. Determining how the Bybee model curriculum affects students' motor satisfaction and their ability to lunge accurately with an airsoft weapon.

### Research Hypotheses

1. The educational curriculum according to the Bybee model has a positive effect on motor satisfaction, learning the skill of accuracy of lunge with an airsoft weapon, and motor satisfaction for members of the research sample.
2. There are statistically significant differences between the averages of the two measurements (pre- and post-test) in the skill level of accuracy of lunge with a shotgun weapon and the motor satisfaction of the members of the research sample.
3. The skill level of accuracy in lunging with a shotgun weapon and the motor satisfaction of the study sample members differ statistically significantly between the averages of the two post-measurements between the two research groups (experimental and control).

### Research fields

**Human field:** Third year students in the College of Physical Education and Sports Sciences / Al-Qadisiyah University.

**Time field:** From 1-12-2022 to 4-2-2023.

**Spatial field:** Fencing Hall in the College of Physical Education and Sports Sciences - Al-Qadisiyah University.

### Research Methodology and Field Procedures

#### Research Methodology

Because it was appropriate for the study and included two equal groups, the researchers employed the experimental approach.

#### Community and Sample Research

The 150 third-year students enrolled in the College of Physical Education and Sports Sciences at Al-Qadisiyah University for the academic year 2022-2023 constitute the research population, according to the researchers. They were picked for the research sample using a random process (lottery), and the final sample size was 40. After excluding failed students, club players, teachers, and students who missed the first few units of instruction, the students were divided into two groups (control and experimental), with a total of twenty students in each group. Consequently, the sample's percentage (28.125%) of the initial population was attained. The control group employed the teacher's imperative technique, whereas the experimental group used the Bybee educational model.

#### Homogeneity and equivalence of the research sample

##### Homogeneity

Prior to beginning work, homogeneity was checked in the variables (height, weight, and age) for both the experimental and control groups, as indicated in Table No. (1) below:

**Table 1:** Shows the homogeneity of the research sample of the two groups in the variables (Length, weight, age)

Variables	Measuring unit	Homogeneity				Skew ness		Result
		Experimental		Control		Experimental	Control	
		Mean	Std. Deviation	Mean	Std. Deviation			
Length	Cm	178.15	7.868	179.24	6.560	-0.781	0.522	Non-sig
Weight	Kg	68.22	5.855	68.35	5.741	0.901	0.983	Non-sig
Age	Month	231.9	11.233	233.75	13.267	0.824	0.784	Non-sig

**Equivalence**

**Table 2:** Shown in Equality was conducted between the two groups in the variables (skill under study)

Variables	Equivalence				Skew ness		Result
	Experimental		Control		Experimental	Control	
	Mean	Std. Deviation	Mean	Std. Deviation			
lunge skill	11.24	0.78	11.33	0.445	0.36 -	0.73-	Equinoctial

**Methods, devices and tools used in the research.**

- Arabic and international sources and references - Research tests and measurements - Individual interviews
- Note - Test evaluation form.
- Motor Satisfaction Scale Form Appendix (1)
- Camera, computer and tablets
- Fencing sword number (20).
- Duelist number (8).
- Duel mask number (10).
- Colored tapes.
- Stop watch (1).

**Tests used in the research**

**Accuracy test for a lunge movement (Bayan Ali, 1997)**

**Objective of the test:** Measure the accuracy of the challenge.

- **Performance specifications:** The player stands in a ready position and at an appropriate distance from the suspended mark, so that the height of the mark is appropriate for the player’s height. At the start signal, the student begins performing (10) continuous lunges at the mark, and the arbitrator calculates the time taken to perform the stabs.

**Registration method**

- The player is recorded for the time it takes to perform (10) stabs at the mark.
- The player is given two attempts and the best attempt is scored for him.

**Measure of motor satisfaction**

We used the motor satisfaction scale, which was modified by (Allawi, 1998, 169), which had thirty items, after looking over a few other motor satisfaction metrics. A very large grade, a big grade, a moderate grade, a weak grade, and a very weak grade are the five answer possibilities on which the tester (student) responds the things. The closer the grade is to the maximum grade, which is (150), the better the student's motor pleasure.

**The exploratory experiment**

On Tuesday, February 12, 2022, the researchers conducted an exploratory experiment on a sample of ten people who were randomly selected from the research community outside the research sample in order to assess the validity of the appeal skill test and the motor satisfaction scale as well as the potential applications for them. To ascertain if the test and the scale were appropriate for the level and scope of the sample, the skill tests were administered at ten in the morning, and the motor satisfaction scale was distributed at precisely two in the

afternoon. The results indicated The experiment's conclusion is that the test and the scale are clear and unambiguous.

**Content validity**

Was acquired by giving the scale and exam to professionals with knowledge of motor learning, psychology, testing, fencing, and instructional strategies. Scale and tests. Regarding the test and scale reliability, the split-half approach was used to determine the reliability of the motor satisfaction scale, giving each student two scores by dividing the test in half. The individual statements are in the first half, while the even statements are in the second. The internal consistency of the first part of the exam is determined by the correlation between these two scores. As a result, the satisfaction scale's dependability coefficient attained its value. Kinetic (0.86)

**Regarding the reliability**

Of the appeal skill test was determined by using the test on the exploratory experiment sample on April 12, 2022, and then applying it again. As long as the identical settings were used for both tests and the data were processed, the test was repeated ten days after the original date. In terms of statistics, the test's reliability was found by calculating the Pearson correlation coefficient, and the result was (0.84), indicating good reliability. The test's impartiality was determined using the Pearson correlation coefficient (Pearson) between the scores of two arbitrators\*\* who assess the test-taker individually while accounting for the test's administration and conditions. The examination. 91 percent of the test findings were very objective.

**The main experiment**

**Pre-test:** On December 15, 2022, at precisely nine in the morning, the researchers conducted the skill pre-test (the lunge accuracy skill) at the fencing hall at the College of Physical Education and Sports Sciences/Al-Qadisiyah University. In the College of Education hallways, the researcher also administered the motor satisfaction scale's pre-test. Following the completion of the skill tests, the same day in physical and sports sciences.

**Educational curriculum**

The topic instructor initiated the control and experimental groups' educational program. The educational program was implemented over the course of fourteen educational units, or two units per week. The main experimental group was implemented from December 16, 2022, to February 2, 2023, with an educational unit time of ninety. The control group followed the teacher-prepared curriculum, while the

experimental group followed the researcher's curriculum using the Bybee model. The teacher presented the skill in accordance with the Bybee model's five stages:

**1. Busy stage**

In it, the skill of lunge (accuracy of lunge) is learned for the first time, and a link is made between previous and current experiences. This is done by dividing the students into two groups and asking questions that stimulate the students cognitively about the skill that is the subject of the lesson.

**2. Exploration stage**

At this stage, students interact with what they have learned from new experiences, as questions arise that are difficult to answer with the information available to them regarding the skill of accuracy of lunge with foil. Here, the teacher enhances the learner's knowledge by presenting slides (PowerPoint) related to the desired skill. Learn it and display it using a data viewer device.

**3. Interpretation stage**

The subject teacher gathers the students' responses to the questions they came up with through group discussion, and then the teacher offers explanations and solutions to address any issues and mistakes that the students might make when performing the skill by creating suitable answers or remedial answers.

**4. Expansion stage**

At this stage, the subject teacher directs the students to apply exercises related to the lunge skill in fencing.

**5. Evaluation stage**

At this point, a few questions are given to the students to

gauge their understanding of the material in relation to its preparatory, main, and final sections. The teacher and student then know where the student is at and can work together to identify any issues that may be preventing them from mastering the appeals skill.

**Post-test**

On Tuesday, February 7, 2023, in the fencing hall at the College of Physical Education and Sports Sciences / Al-Qadisiyah University, post-tests for the skill of lunge accuracy were administered to the research sample for the control and experimental groups following the completion of the educational program's implementation. The same day also saw the administration of the motor satisfaction scale post-test. Within classrooms. In terms of time, location, tools utilized, implementation strategy, and the supporting work team, the researcher attempted to replicate the pre-test circumstances.

**Statistical methods**

The researchers used the statistical bag.

**Presentation, analysis and discussion of the results**

The researchers presented the research findings in the form of tables in order to meet the research objectives and confirm the validity of their hypotheses. They then examined and discussed the data to determine the existence of the differences and their statistical significance from a precise scientific standpoint, as follows:

**Presentation, analysis and discussion of the results of the pre- and post-tests of the skill of fencing accuracy in the research for the control group**

**Table 3:** Shows the statistical treatments for the two pre-tests of the skill of accuracy of appeal in research for the control group.

Variables	Measuring unit	Pre-test		Post-test		T Calculated	Sig level
		Mean	Std. Deviation	Mean	Std. Deviation		
Lunge skill Accuracy	Time	11.24	0.78	10.24	0.54	5.14	0.0

The control group's pre- and post-test arithmetic means, standard deviations, computed T-values, and significance levels are displayed in Table (3). In the pre-test, the arithmetic mean was 11.24 and the standard deviation was 0.78, but in the post-test, the arithmetic mean was 10.24 and the standard deviation was 0.54. Between the two tests, the value of (t) was (14-5), above the tabular (t) at a significance level of (0.05). The degree of freedom (19) was (2.09), indicating moral importance.

By presenting and analyzing the results of the pre- and post-tests in Table (3) for the test of lunge skill in the fencing game and for the control group, it became clear that there are significant differences between the pre- and post-tests and in favor of the post-tests for the control group.

The control group's regularity in the educational units assigned to it in accordance with the curriculum, along with performance repetitions and the continuous application of the units allocated to learning the skill of striking in the game of fencing, are the researchers' explanations for these differences. This aligns with the assertion made by Maigl

(2004) that the inherent features of the process of learning are As long as the instructor adheres to the guidelines and solid principles of the learning process, performs proper performance, and concentrates on it until performance is solidified and steady, learning must develop".

The researchers also think that the students' drive and motivation contributed to the improvement seen in the control group since a learner can only perform well when they are driven and motivated, which is consistent with (Nahida Al-Dulaimi, 2011, 29) (There are a number of ways to encourage learners to be effective or to play the game whose skills they need to learn and practice. These include creating opportunities for motor learning, making the proper goal for learning and mastering the skill clear, and striking a balance between meeting the needs of the learner and their needs".

**Presentation, analysis and discussion of the results of the pre- and post-test of the skill of fencing accuracy in the research for the experimental group**

**Table 4:** Shows the statistical treatments for the pre- and post-tests of the fencing accuracy skill in the research for the experimental group.

Variables	Measuring unit	Pre-test		Post-test		T Calculated	Sig level
		Mean	Std. Deviation	Mean	Std. Deviation		
Lunge skill Accuracy	Time	11.33	0.445	9.47	3.23	6.42	0.0



The experimental group's pre- and post-test arithmetic means, standard deviations, computed T-values, and significance levels are displayed in Table (4). In the pre-test, the arithmetic mean was 11.33 and the standard deviation was 0.445; in the post-test, the arithmetic mean was 9.47 and the standard deviation was 3.23. The degree of freedom (19) is (2.09), which is morally significant, and the value of (t) between the two tests was (6.42), which is higher than the tabular (t) with a significance level of (0.05).

It was determined that there are notable differences between the pre- and post-tests, favoring the post-tests for the experimental group, by presenting and analyzing the results of the pre- and post-tests in Table (4) for the test of lunge skill in the fencing game and for the experimental group.

The Bybee model, which shows a state of development in the educational unit that differs from the educational unit in which the teacher's method is used, and indicates that the learning cycle is in accordance with it, is the reason why the experimental group performed better on the post-tests. The experimental group's method aided in the learning process, and this measurable advancement in the students' learning level was made possible by repetition and practice. The researchers also find that, in their opinion, when a sample is presented in its raw form without any prior learning - particularly for skills that are difficult or complex - and is

exposed to factors that alter motor behavior, a change in learning level is necessary, and it has been demonstrated that this is superiority in favor of the tests. Dimensionality, which the researcher believes makes sense for a sample that had never practiced the skill or taken practical lessons to learn how to lunge in fencing, is another way that the researchers see the learning process: the Bybee model makes learning more dynamic and interactive by encouraging students to think critically, interpret stimuli, and modify their cognitive schemas. It is the learner's responsibility to make sense of his experiences and further his learning. When a student looks up information on his own and then shares it with him, he learns to the fullest degree possible. In order for others to draw the best conclusions, in more technical terms, the researchers think that the five-stage Bybee model provides a greater opportunity for experience and effective learning conditions, particularly for learners who are self-sufficient or dependent on others. This is in line with the findings of (Methaq and Israa, 2016) which state that the Bybee model allows learners to consider a greater variety of problems and their solutions, which in turn helps them develop their own learning process.

**Presentation, analysis and discussion of the results of the post-test of the research challenge skill for the control and experimental group**

**Table 5:** Shows the statistical treatments for the two post-tests of the research challenge skill for the control and experimental groups.

Variables	Measuring unit	Control		Experimental		T Calculated	Sig level
		Mean	Std. Deviation	Mean	Std. Deviation		
Lunge skill Accuracy	Time	10.24	0.54	9.47	3.23	3.43	0.0

Tabular value = 2.02 at degree of freedom (38) and significance level (0.05)

The computed T-value, the standard deviation, the arithmetic mean, and the significance level for the control and experimental groups in the two post-tests are displayed in Table (5). While the experimental group's arithmetic mean in the post-test was 10.24, the control group's arithmetic mean was 10.24 and the standard deviation was 0.54. The standard deviation was 3.23 and the value was 9.47. The degree of freedom (38) is (2.02), which is morally significant, and the value of (t) between the two tests was (3.43), which is more than the tabular (t) with a significance level of (0.05).

The researchers believe that the reason for the superiority of the experimental group is that the learning process according to the Bybee model is that the research sample completed the motor learning process in its initial stages, which is represented by the process of construction and motor visualization in an incomplete form, as the learner is able to get an idea about the sections of the movement in the general form without thinking about the minutes or the details. The subtleties of the skill and also bypassing the stage of unnecessary movements that always accompany the motor performance, which is represented by the abundance of neuromuscular instructions and tensions. After that, the sample was able to distinguish the movement and its different sections by knowing the required motor duty and avoiding excessive movements. The researchers also believe that the educational program according to Bybee's model can bring the learner to the stage of stabilization and automaticity in performance, and this represents the learner's ability to perform well and appropriately in accordance with their age

and motor capabilities, in addition to the possibility of reducing the occurrence of errors. The researchers also believe that the learner's arrival at the stage very advanced in performance, which is expressed in high motor performance of the skill, complete clarity of performance in all its details, automation, and willingness to learn skills. Researchers also think that the reason for the improvement in the experimental groups' motor skill performance is that students rely on their mental training and motor drawing of the skill they perform, repeating the right ones until they reach the mastery stage (discussion and self-dialogue). This is in line with the findings of the study conducted by Rudaina and Azzam (2003), which found that "one of the important steps that enhance the educational process is the learner's collective work and the exchange of opinions and ideas among themselves in order to reach a high understanding of the skills involved in learning." (Sabri, 2000, 277). (To the result that the student becomes positive and interested via the discussion, questions, and ideas stated and given by the instructor, and the educational process is appropriately formed based on the roles of both the teacher and the learner). According to the Bybee model, learning is an active cognitive process that gives the student the chance to go through a variety of educational experiences through which he finds the idea to be learnt (Mithaq and Israa, 2016). Because the Bybee model stresses the value of practice, learning is regarded as significant. Work improves a learner's capacity for experience acquisition.

**3.4 Presentation, analysis and discussion of the results of the pre- and post-tests of motor satisfaction for the control and experimental groups**

**Table 6:** Shows the statistical treatments for the pre- and post-tests of motor satisfaction for the control and experimental groups.

Groups	Pre-test		Post-test		T Calculated	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation		
Control	11.21	0.60	12.09	0.62	3.86	Sig
Experimental	11.74	0.67	13.45	0.76	4.86	Sig

According to Table (6), the control group's arithmetic mean in the motor satisfaction pre-test was 11.21, with a standard deviation of 0.60. The arithmetic mean in the motor satisfaction post-test was 12.09. It was determined that the computed (t) value for the pre- and post-tests, which came to (3.86) with a standard deviation of (0.62), is more than the tabulated (t) value of (2.09) with a degree of freedom (19) and under the significance threshold of (0.05).

In the motor satisfaction pre-test, the experimental group obtained an arithmetic mean of (11.74) with a standard deviation of (0.67). The arithmetic mean value was observed in the motor satisfaction post-test (13.45) with a standard deviation of (0.76) and by extracting With a degree of freedom of (19) and a significance level of (0.05), the computed T value for the pre- and post-tests, which came out to be (4.86), was higher than the tabular T value of (2.09).

Table (6) makes it evident to us that the control and experimental groups' levels of motor satisfaction have clearly increased. Given the strong correlation between motor satisfaction and students' performance on learning skills, teachers must determine the elements that support students' motor satisfaction during the learning process. According to Al-Hassan and Al-Ways (1990, 39), one of the most notable aspects of the educational process is that it has clear goals so that all of its members work together to achieve those goals. This is consistent with the idea that in order to achieve the

desired goals in achieving the mechanism in learning motor skills, it is necessary to create a state of satisfaction among these students. The members of those groups are learning from this, and as a result, each of them has formed a psychological predisposition that naturally motivates them to strive toward accomplishing "Goals for the teams he belongs to in the future".

The researchers think that the two groups employed strategies and models that raised the performance level of the pupils. They contributed to the enhancement of the skill component, as evidenced by their increased motor pleasure, which provides them with strong incentive to raise their technical proficiency, particularly in the execution of skills and the use of lesson plans created by the instructor. As a result, educators need to foster in their pupils a sense of fulfillment. The psychological state that the student experiences when executing sports motor skills is reflected in the students' percentage of confidence, which is demonstrated by this. This is consistent with the statement made by Hussein (2010): "Motor satisfaction expresses the extent to which the student feels satisfied and satisfied as a result of participation." When using fundamental or specialized motor skills.

**Presentation, analysis and discussion of the results of the experimental and control groups in the post-test of motor satisfaction**

**Table 7:** Shows the statistical treatments for the experimental and control groups in the post-test of motor satisfaction.

Variables	Experimental		Control		T Calculated	Sig Type
	Mean	Std. Deviation	Mean	Std. Deviation		
Motor satisfaction	13.45	0.76	12.09	0.62	4.980	Sig

Table (7) makes it evident that there are notable differences favoring the experimental group that applied the Bybee model in creating circumstances and conditions that assist students in resolving conflicts in a more suitable manner, and this helped to increase the students' motivation for practice and learning. Because it gives students a significant role in the educational process and, consequently, a sense of satisfaction with performance and reaching the desired goal in the learning process, this educational model also helped to raise the level of the psychological aspect that generated self-confidence in the students through each student's feeling of the importance of the role he plays (Ibrahim, 1995, 19). Developing a learner's self-confidence is one of the cornerstones of successful motor learning. This helps the student become more independent and productive, which encourages him to take in and remember as much as he can from his experiences".

Additionally, according to the researchers, the Bybee model puts the student at the center of the learning process and equips them with the practical skills they need to complete tasks. This approach not only makes learning more enjoyable for students but also increases their interest in the academic subject, which in turn boosts academic achievement. From their satisfaction-inducing passion of exploration and pleasure. Following the information-gathering process, feeling of motor pleasure arises from intrinsic internal motivation, which is superior to external motivation in terms

of improving performance and attainment (Al-Talib, 2011)".

**Conclusions and recommendations**

**Conclusions**

1. When learning how to lunge with an airsoft weapon under study, adopting Bybee's approach is more beneficial than the teacher's way.
2. The research sample members' acquisition of the skill of lunging with an airsoft weapon is positively impacted by the instructional units, as per the Bybee model.
3. Developing motor satisfaction was positively impacted by the Bybee model-based instructional modules for the research sample's participants.

**Recommendations**

1. A focus on using instructional modules based on the Bybee model to teach third-year College of Physical Education and Sports Sciences students foil techniques.
2. To gain other foil abilities, it is recommended to carry out comparable investigations with distinct samples utilizing the Bybee model.
3. The need of applying the Bybee model to the acquisition of skills for a variety of tasks.
4. The need to employ instructional strategies that boost student engagement and effectiveness in the learning process.
5. Pay more attention to kids' psychological and emotional

needs as they participate in different sports.

6. Considering instructional strategies and models that enhance and foster students' motor pleasure since they have a bearing on elevating the bar for artistic performance.

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**Appendix (1)  
Motor satisfaction scale**




N	Paragraphs	It applies to me to a very large extent	It applies to me to a great extent	Applies to me to a moderate degree	Applies to me to a small degree	It applies to me to a very small extent
1	Completely satisfied with my motor abilities					
2	I have the ability to learn new motor skills					
3	I have the ability to maintain my body balance while performing some motor skills					
4	I can understand the tactical change on the field					
5	I can apply the tactic required by the teacher					
6	I have a good ability to learn new motor skills					
7	I can keep my balance steady					
8	I can move along the lines of the field as required of me					
9	I am able to maintain my balance by standing on one foot for a reasonable period of time.					
10	I can move quickly around some obstacles					
11	I can engage in some movement activities without fear of falling					
12	I can bend and stretch his body easily					
13	I can perform physical movements better than most of my peers					
14	I can perform violent physical movements					
15	I have the ability to run fast					
16	I can engage in some physical activities that require a high level of motor skill					
17	I can engage in physical activity for a long period of time without feeling tired					
18	I can learn motor skills easily					
19	I have clear confidence in my motor abilities					
20	I feel completely satisfied with my motor abilities					
21	I can keep my balance while attacking					
22	I have the ability to switch from my defensive to offensive skills and vice versa					
23	I can master offensive and defensive skills					
24	I can estimate distances while performing skills					
25	I can relax my body whenever I want					
26	I can use both arms and legs simultaneously when required					
27	I can perform strokes very well					
28	I can exert physical effort throughout the fight					
29	The teacher thinks my mobility is good					
30	I have the ability to move my body efficiently in various directions					

**Appendix (2)**

An example of an educational unit  
 Learning goal: Teaching the lunge movement. Experimental group: 10 players.

Unit time: 90 minutes. Educational unit: (7).  
 Educational goal: Developing joy and happiness in the hearts of players.

N	Sections of the educational unit	Time	Explanation of activities and movements	Organization	Bybee model	Notes
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1	Preparatory section	20 minute	<ul style="list-style-type: none"> <li>- General warm-up: General preparation for all muscles and organs of the body. (i.e. warming up and stretching exercises for the muscles)</li> <li>- Special warm-up: Special preparation for the muscles working in the main part</li> </ul>			<p>The general warm-up emphasizes warming up the body and stretching the large muscles. In the special warm-up, the muscles working in the required skill are stretched.</p>
2	Main section	65 minute	Learning and applying the knife lunge movement		<p>Emphasizing that the lunge movement is the end of every attack and avoiding performing attacks with the arm only so that the player does not lose the priority of attacking in the duel.</p> <p>The challenge is also made by taking into account the distance of the duel, so that the distance is not large and thus makes it difficult to move forward or backward and thus his target is vulnerable to being touched, or it is small so that the attacker does not reach the opponent's goal. Therefore, the attacker must realize the real distance to reach the opponent's goal.</p>	
	A- The educational aspect	20 minute	<p>The trainer explains the technical performance of the lunge movement, explaining the most common mistakes in it to avoid.</p> <p>The coach displays the skill in front of the players.</p> <p>The coach presents the skill to the players via (a live model - a video presentation - pictures or slides - etc.).</p> <p>The skill is performed by one of the players individually in front of the coach</p> <p>The skill is performed by the players collectively in front of the coach.</p>			<ul style="list-style-type: none"> <li>- Emphasize standing in the on-hand position and maintaining it during the lunge movement.</li> <li>- Maintaining the distance between the feet</li> </ul>
	B- The applied aspect	45 minute	<ul style="list-style-type: none"> <li>- Perform lunge movements (8-12 times)</li> <li>- Performing a lunge movement from a step forward. (8-12 times)</li> <li>- Performing a lunge movement, one step backward and then one step forward. (8-12 times)</li> <li>- Performing a lunge movement from three steps forward. (8-12 times)</li> <li>- Performing a backward movement and two steps forward. (8-12 times)</li> </ul>			<ul style="list-style-type: none"> <li>- Ensure that you stand by placing the uncard correctly and maintaining it while performing the lunge movement</li> <li>- Emphasis on correcting mistakes and working first without a weapon and re-working with a weapon.</li> </ul>
3	Concluding section	5 minute	Calming and relaxation exercises.			