



## The effectiveness of an educational curriculum according to the (Felder and Silverman) model in developing reflective thinking and learning some basic skills in basketball

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### ABSTRACT

And that the process of dealing with patterns of learning and thinking enables researchers to achieve positive results that provide an opportunity to prepare them and qualify them scientifically and practically for the future, and given the nature of the tennis game, it is natural that the ability to develop reflective thinking plays a major role in important moments; Because this matter requires thinking and making a quick decision, or finding a smart solution that is consistent with the playing situation.

The game of basketball is one of the most popular games, so it is like any other game that has its basic principles that form the strong support on which it is based, and the advancement of the level of any student and the extent of his success depends to a large extent on the extent of his mastery of these basic principles and skills and can be achieved This is done by following the correct scientific method in the learning process.

**Keywords:** *educational curriculum, model (Felder and Silverman), reflective thinking, basic skills in basketball.*



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### 1-INTRODUCTION:

Those in charge of the educational process are working to find various means, methods and models aimed at developing the educational process, including the (Felder and Silverman) model, which has the possibility of each student learning in his own way and his own capabilities, by attracting the learner to his preferred pattern while expanding and not neglecting the less preferred patterns, and increasing awareness Teachers have individual differences among learners.

And that the process of dealing with patterns of learning and thinking enables researchers to achieve positive results that provide an opportunity to prepare them and qualify them scientifically and practically for the future, and given the nature of the tennis game, it is natural that the ability to develop reflective thinking plays a major role in important moments; Because this matter requires thinking and making a quick decision, or finding a smart solution that is consistent with the playing situation.

The game of basketball is one of the most popular games, so it is like any other game that has its basic principles that form the strong support on which it is based, and the advancement of the level of any student and the extent of his success depends to a large extent on the extent of his mastery of these basic principles and skills and can be achieved This is done by following the correct scientific method in the learning process.

Hence the importance of the research lies in the preparation of an educational curriculum according to the tendencies and desires of the learners using the model (Felder and Silverman) aimed at developing their reflective thinking and learning some basic skills in basketball that contribute to the acquisition of skills and facilitate their performance and mastery.

### 2-The purpose of the study:

To know the effectiveness of an educational curriculum according to the (Felder and Silverman) model in developing reflective thinking and learning some basic skills in basketball.

### 3-search procedures

#### 3-1-Methodology:

The researcher relied on the experimental approach because it is considered the correct approach for solving problems and finding accurate and elaborate solutions.

#### 3-2-The research sample :

The researcher identified the research community with a group of first-stage students in the College of Physical Education and Sports Sciences / University of Al-Qadisiyah for the academic year 2022-2023 - whose number is (156) students. It consists of four divisions (C, D, E, and F). Two divisions (C) were chosen to represent the experimental group, and Division (E) to represent the control group, with (15) students for each division.

#### 3-3-Study variables :

The study variables included the following:

First: Reflective thinking:

Second: Basic skills in basketball, including:

- 1- The plump.
- 2- Thoracic handling.
- 3- Scoring.

#### 3-4- field research procedures

##### 3-4-1-Determine the tests used in the research:

###### First: the reflective thinking test (the reflective thinking scale) :

The researcher used the reflective thinking scale (Annex 1) to develop students' reflective thinking. This scale contains (16) items distributed on four levels:

1. The usual work: It refers to everything that the individual has previously learned through repeated use and has become an activity that is carried out automatically.
2. Understanding: This level includes realizing and assimilating concepts without reflecting on their significance or meanings in the person or the practices of the situation.
3. Meditation: It refers to all the emotional and mental activities in which individuals participate in order to explore their experiences and delve into them in order to reach new assessments and understandings.
4. Critical reflection: This level represents the highest levels of reflective thinking and involves fundamental shifts in viewpoints. It is achieved when the individual becomes able to justify his viewpoints, thoughts, feelings, and actions.

###### Second: Description of the scale and method of correction:

Reflective thinking in correction according to the five-point response scale. The scale consists of (16) items, and (5) items have been allocated for each level, which are (completely agree), (agree), (agree), (not sure), (disagree), and (strongly opposed). Each paragraph was given a score, as shown in Table (3) below.

| Paragraph        | Degree |
|------------------|--------|
| totally agree    | 1      |
| Agree            | 2      |
| Unsure           | 3      |
| Opposed          | 4      |
| Strongly opposed | 5      |

Thus, the highest score for the scale is (80) degrees, showing the paragraphs of the scale.

##### 3-4-2 Measuring the skills used in the research:

The researcher studied the basic skills in the following basketball (plumping - chest handling - scoring) which are taught within the basketball course, and for their importance in the basketball game and were measured through a form to evaluate the skillful performance of 10 degrees for each skill that depends on the apparent form of performance and result. The researcher used arbitrators to calculate the degrees of skillful performance.

#### 3-5- The main experience

##### 3-5-1-Pre-test:

The pre-test for the research sample to test reflective thinking was conducted on Sunday 6/11/2022, as the researcher distributed the reflective thinking form (Appendix 1), and the test time took (30) minutes, and on Monday 7/11/2022 the researcher conducted a test Basic basketball skills studied on the basketball court in the College of Physical Education and Sports Sciences - University of Al-Qadisiyah.

##### 3-5-2-Educational Curriculum:

By looking at the scientific sources and previous studies, an educational curriculum was prepared according to the tendencies and desires of the learners and within the specificity of the methods of the Feldsilverman model. The

curriculum included a set of educational exercises for learning the studied basketball skills, in addition to organizing these exercises within the educational units. Repetition and practice were adopted For the one skill and then moving to the other skill, and there was a pairing between the skills at the end of each style, and the educational curriculum (Appendix 2) included the principle of gradation from easy to difficult, and real-time feedback was adopted during the performance of the skills, and the number of educational units of the curriculum was (16 ) an educational unit of (80) minutes per educational unit, and the implementation of the curriculum took (8) weeks and at the rate of two educational units per week, as the researcher used a set of skill exercises that aimed at learning and mastering skills through diversity in their forms, in addition to that the educational curriculum included A set of exercises in a (practical-contemplative) style that aims to learn the studied basketball skills, in addition to that the principle of diversity and change in the performance of the skills was relied upon in order to reach the learner to the ideal performance, and to build a motor program for the skill, and the curriculum was started on Monday on (11/14/2022) and it was completed on Monday (2/1/2023), knowing that the educational curriculum was applied to the experimental group with (practical-reflective style) and the control group is subject to the curriculum of the subject teacher.

### 3-5-3-Post-test:

After completing the application of the educational curriculum for the experimental group and the curriculum followed by the teacher for the control group, which included (16) educational units, the researcher conducted the post-tests for reflective thinking on Sunday (15/1/2023), and to evaluate the performance of the basketball skills studied on Monday (16/ 1/2023), with the same conditions and specifications as the pre-test, and obtaining and recording data in forms in preparation for statistical processing.

## 4- Presentation, analysis and discussion of results

### 4-1-Presenting the results of the differences between the pre and post test in the development of reflective thinking and basic skills in basketball for the experimental and control groups.

#### 1-4-1-Presenting the results of the differences between the pre and post test in the development of reflective thinking and basic skills in basketball for the experimental group.

Table(1) Shows the differences between the pre and post tests of the experimental group, Division (C)

| Tests               | Pre test |                    | Post test |                    | T value | Significance level | Significance type |
|---------------------|----------|--------------------|-----------|--------------------|---------|--------------------|-------------------|
|                     | Mean     | Standard deviation | Mean      | Standard deviation |         |                    |                   |
| reflective thinking | 39.4000  | 4.18842            | 60.6667   | 6.55381            | 12.853  | 0.000              | Moral             |
| Plump               | 4.1333   | 0.63994            | 5.7333    | 1.38701            | 4.989   | 0.000              | Moral             |
| Chest passing       | 4.5333   | 0.83381            | 6.0000    | 1.25357            | 3.290   | 0.005              | Moral             |
| Scoring             | 4.2000   | 0.86189            | 6.2000    | 1.08233            | 4.583   | 0.000              | Moral             |

n = 15 under the level of significance = (0.05)

#### 2-4-1-Presenting and analyzing the results of the differences between the pre and post test in the development of reflective thinking and basic skills in basketball and in the control group.

Table(2) Shows the differences between the pre and post tests of the control group Division (e)

| Tests               | Pre test |                    | Post test |                    | T value | Significance level | Significance type |
|---------------------|----------|--------------------|-----------|--------------------|---------|--------------------|-------------------|
|                     | Mean     | Standard deviation | Mean      | Standard deviation |         |                    |                   |
| reflective thinking | 39.6000  | 5.46155            | 53.8000   | 5.75946            | 6.380   | 0.000              | Moral             |
| Plump               | 4.0000   | 0.75593            | 4.7333    | 0.79881            | 3.214   | 0.006              | Moral             |
| Chest passing       | 4.3333   | 0.97590            | 4.8667    | 0.83381            | 1.835   | 0.088              | non-moral         |
| Scoring             | 4.0000   | 0.65465            | 4.8667    | 1.40746            | 2.694   | 0.017              | Moral             |

n = 15 under the level of significance = (0.05)

#### 3-4-1-Presentation of the results of the differences in the post-test between the experimental and control groups in the development of reflective thinking and basic skills in basketball.

Table(2) Shows the differences between the pre and post tests of the control group Division (e)

| Tests               | Experimental group |                    | Control group |                    | T value | Significance level | Significance type |
|---------------------|--------------------|--------------------|---------------|--------------------|---------|--------------------|-------------------|
|                     | Mean               | Standard deviation | Mean          | Standard deviation |         |                    |                   |
| reflective thinking | 60.6667            | 6.55381            | 53.8000       | 5.75946            | 3.048   | 0.005              | Moral             |
| plump               | 5.7333             | 1.38701            | 4.7333        | 0.79881            | 2.420   | 0.022              | Moral             |
| Chest passing       | 6.0000             | 1.25357            | 4.8667        | 0.83381            | 2.915   | 0.007              | Moral             |
| scoring             | 6.2000             | 1.08233            | 4.8667        | 1.40746            | 2.908   | 0.007              | Moral             |

n = 30 under the significance level = (0.05)

#### 4-2 Discussion :

Through the results of tables (3,2,1) it is clear to us that there are statistically significant differences between the pre and post tests of the experimental and control groups and in favor of the post test, as well as the presence of statistically significant differences in the post test between the experimental and control groups and in favor of the experimental group, and the researcher attributes The reason for this development is the result of the positive impact of the prepared educational curriculum that was applied according to the tendencies and desires of the learners, as it works to provide a fertile learning environment and provide methods that are commensurate with the nature of the learner and his educational environment in a way that stimulates the learners' motivation and access to achieving optimal performance that helps develop their reflective thinking as well as Learn some basic skills in basketball.

The researcher believes that the reason for this is that the application of the reflective practical method exercises helped on how to perform correctly until reaching the mechanism in the performance and fixing it, and that the reflective practical method exercises are the important means and method that contributes greatly to the development of reflective thinking and learning some basic skills among learners to perform the skills and contributes Also in creating a clear picture of the strategy of the game through explanation and clarification and gives freedom of thinking in performance and implementation through the use of this method that this method stimulates the learner's thinking and activates it to issue new ideas and creativity in performance with orientation towards facts and concepts in return abstract thinking and orientation towards facts and theories And beyond the meaning, and thus the learner will be able to overcome a greater number of difficulties facing him and, accordingly, make appropriate decisions. And the positive impact on the learning process, as it works to increase the attention of learners and break the monotony of educational situations. What is known to educational psychologists is that education passes through three stages, the first is attention, the second is awareness, and the third is understanding. Which is about more exciting and more interesting leads to increase the attention of the learner and cut off the severity of the educational situation and prevent distraction of the mind of the learner. And the optimal use of the vocabulary of the educational curriculum used, where every skill is learned according to what is required.

#### 5- Conclusions:

1. There is an effectiveness of the educational curriculum according to the (Felder and Silverman) model, which had a positive impact on developing reflective thinking and learning some basic skills in basketball.
2. The (Waldrosilverman) model contributed to the development of reflective thinking and deepening students' understanding through the availability of the factor of correlation and harmony between the elements of the educational material.
3. The (Waldrosilverman) model contributed to increasing students' ability to find appropriate solutions to educational situations because it developed the ability to think, extrapolate, deduce, and comprehend, which helped retain more meaningful information, which helped develop reflective thinking.

#### SOURCES:

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#### Accessory (1) Reflective thinking scale

|   | Paragraphs  | Agree | Totally agree | Opposed | Strongly opposed |
|---|---|-------|---------------|---------|------------------|
| 1 | I carry out some activities without thinking about what I am doing.         |       |               |         |                  |
| 2 | This class requires me to understand the concepts presented by the teacher. |       |               |         |                  |

|    |  |  |  |  |  |
|----|--|--|--|--|--|
| 3  | Sometimes I discuss others in their thinking times and try to think of the best way.           |  |  |  |  |
| 4  | As a result of what I have learned in this chapter, I have changed the way I see myself.       |  |  |  |  |
| 5  | In this chapter I do the same work several times without thinking about what I am doing.       |  |  |  |  |
| 6  | Being successful in this class requires them to learn the materials I'm learning.              |  |  |  |  |
| 7  | I like to think a lot about what I do. I look for alternative ways of measuring the same work. |  |  |  |  |
| 8  | This thought changed thoughts I was holding on to in advance.                                  |  |  |  |  |
| 9  | As long as I can remember the exam material, I don't have to think too much.                   |  |  |  |  |
| 10 | Carrying out science activities requires an understanding of the material I am learning.       |  |  |  |  |
| 11 | I reflect a lot on actions to see if I can improve what I do.                                  |  |  |  |  |
| 12 | As a result of this chapter, I changed the way I used to do my work.                           |  |  |  |  |
| 13 | My follow-up to what the teacher says spares me from thinking a lot about his subject.         |  |  |  |  |
| 14 | I constantly think about the subjects I am learning.   |  |  |  |  |
| 15 | I often revisit my experiences in order to learn from them.                                    |  |  |  |  |
| 16 | This chapter I discovered errors that I previously thought were correct.                       |  |  |  |  |

**Accessory (2): The educational curriculum model prepared according to the (Felder and Silverman) model / the first educational unit**

**Target: Learning the skill of chest handling Date: 11/21/2022**

**Time: 80 minutes**

| Unit sections   | exercises used   | Notes  |
|---|--|--|
| Preparatory section (15min)                           | -General warm-up (walk - jog)<br>-Warm up your body parts preparation<br>- Warm up exercises for arms and legs   | - Confirmation of the system.<br>-The students move in a row<br>-The warm-up is for all parts of the body.   |
| Main section (60 min)<br>Educational Activity (15min) | -Provide a general idea about the skill of handling the chest in basketball, what we mean by it and when it is used.<br>-Explanation of the skill by the model (the teacher).<br>-Teaching the correct ball handling<br>-Presentation of parts of the skill by the teacher | -They understand what the skill includes without memorizing it, because memorization leads to fading.<br>-Explain the importance of each stage of the skill.<br>-Determine the mistakes that the learner might make in order to overcome them and avoid making them.<br>- The presentation must be emphasized by the model, because the practical, contemplative method is learning through experimentation. |
| Practical activity (45 min)                           | -An exercise in standing, holding the ball with two hands, and handling with a colleague (12), repetitions (10 minutes).<br>-An exercise from standing, catching the ball from a colleague (12), repetitions (11 min)  | -Giving feedback by the teacher.<br>-Understanding what the skill includes without memorizing, because memorization leads to fading.<br>-Explain the importance of each stage of the skill.  |

|                          |  |                                       |
|--------------------------|--|---------------------------------------|
|                          | <ul style="list-style-type: none"> <li>-An exercise from the step of walking, holding the ball with two hands, and handling with a colleague (10) repetitions (12 min).</li> <li>- An exercise from standing, catching the ball from a colleague, and then handling (8) repetitions (12 d).</li> </ul> | Ensure performance is correct.        |
| Concluding Section(5min) | <ul style="list-style-type: none"> <li>- Calming exercises - Taking attendance - Returning the tools</li> </ul>  | -Giving feedback on the studied skill |