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Effect of Karen's model to developing the mental fitness and innovative thinking for female students second stage

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Abstract

The process of acquiring new educational skills is still relatively weak and does not contain the element of renewal, and renewal means innovation and innovation means the direction and desire towards this important work in our lives and practices and the importance of physical education, which is manifested in ethics, science and innovation in the service of human life and through the previous researcher's knowledge of the physical education curriculum applied in Institutes, colleges and educational institutions, which develops in a simple and non-renewable way the innovative capacity. Therefore, the researcher decided to shed light on the Karen model by relying on the level of mental fitness that the students possess, innovative thinking, and finding appropriate solutions, therefore the research aims to:Preparing an educational curriculum using Karen's model in developing the mental fitness and innovative thinking of female students. And Knowing the effect of the educational curriculum using Karen's model to developing the mental fitness and innovative thinking for female students.

While the most important conclusions were:

1- Karen's model and the method used by the teacher contributed to the development of mental fitness and innovative thinking of the students.

2- The effect of the units prepared by the researcher on the experimental group, where it outperformed the control group in terms of mental fitness and innovative thinking for female students.

3- Karen's model made students a main focus in the education process, as it led to positive interaction between female students and participation throughout the lesson period.

Keywords: Karen model, mental fitness, innovative thinking.

Introduction:

Teaching methods are the first step in which the curriculum is put into practice, and it is also the first practical test of the suitability of the curriculum in terms of its objectives

and content for the learner, for whom it was developed. The difference in its nature leads to the different philosophical, psychological and educational theories on which it is based. Therefore, it is important to know the nature of each method of teaching and the foundations on which it is based, and the learning situations that suit it more than others.

In order to find more effective models that have an impact on students, it is imperative that he be able to acquire information that is useful to them in facing new situations and benefit from it in changing ideas, issuing judgments and generating new ideas in order to be able to achieve the objectives of the educational process.

Therefore, those in charge of the educational process tended to find various methods, methods and models aimed at developing the educational process, including the Karen model. This model is characterized by being a multi-method integrated teaching model based on the foundations of cognitive theory, as it derives its idea from the meaningful learning theory of Osbel and the constructivist theory of Jean Piaget, which made the learner is the focus of the educational process, investing and revitalizing previous knowledge, and acquiring new knowledge in an integrative synthetic framework of the knowledge structure that is in line with the requirements of the educational situation in which previous information is invested and experiences are evoked for the purpose of building knowledge.

Today we live in a world in which information and knowledge flow without interruption as a result of technological development and scientific progress, as mental fitness plays an important role in the student's processing of his information and his acquisition of experiences and skills and adaptation to life. With the problems and difficulties that he faces with high confidence, and mental fitness works to remove the negative thoughts of the individual to replace them with positive thoughts and take advantage of new ideas and positive interaction with the variables and developments by calling and employing what the individual possesses of information, skills and experience.

Hence, the importance of research and the need for it to use this model in developing the mental fitness and innovative thinking of students, as it includes educational steps and enriching them by creating effective means that stimulate the minds forfemale students, which helps to facilitate information acquisition, storage and retrieval faster.

Research problem:

Teaching methods are all that follow from procedures, steps, and sequential, interrelated ways to organize information, attitudes, and experiences, to achieve a specific educational goal or set of goals, and through which several innovations are extracted due to its always renewed comprehensiveness.

Through the researcher's follow-up to the mechanisms of teaching and education processes in the College of Physical Education and Sports Sciences, there are many educational models that were put forward in the practical arena that were not used and tried during the processes of

learning games and various sports skills, so the researcher decided to shed light on Karen's model by relying on what she possesses the students from the level of mental fitness and innovative thinking and finding appropriate solutions to the situations required due to the steps that this model contains that help the students to learn, so the researcher decided to prepare educational units for the Karen model, which are commensurate with the level of the students, which may have a positive impact on mental fitness and innovative thinking in the service of the process educational.

Research objectives:

- Preparing an educational curriculum using Karen's model in developing the mental fitness and innovative thinking of female students of second stage / University of Kufa.
- Knowing the effect of the educational curriculum using Karen's model in developing the mental fitness and innovative thinking of female studentsof second stage / University of Kufa.

Research hypothesis:

- The educational curriculum using Karen's model has a positive effect to developingfemale students' mental fitness and innovative thinking.

Research methodology and field procedures:

Research Methodology:

The researcher used the experimental method for its suitability and the nature of the research.

Community and sample research:

The research community consisted of students representing the second stage in the College of Physical Education and Sports Sciences of the University of Kufa for the academic year 2020-2021, numbering (25) students, and (20) female students were selected and divided into two groups (10) for the experimental group and (10) for the control group.

Determine the search variables:

Mental Fitness Scale:-

The researcher reviewed many scientific sources and references, studies and research for the purpose of finding a mental fitness scale that fits the research sample, and the researcher found only the scale prepared by (the conscience of the stubbornness of the owner, 2016) [(1)] and this scale consists of (97) paragraphs as the researcher presented paragraphs the scale through a questionnaire form on a group of experts and specialists in the field of tests, measurement, psychology and teaching methods to find out the suitability of the paragraphs of the scale to the research sample and its measurement of mental fitness among university students.After collecting and unpacking the forms, it was found that the experts agreed on the validity of the paragraphs of the mental fitness scale for undergraduate female students, as the percentage of experts' agreement reached 100%.In order to calculate the degree that the respondent obtains through his answer to the scale items, the researcher relied on the scale

correction on the two degrees (1) and (zero), where they are given (1) if the answer is positive and given (zero) if the answer is negative,in this way, the total score for each test respondent was calculated by summing his answer scores from all the paragraphs, where the lowest score for the test was (zero) and the highest score was (97) with a hypothetical average of (48.5) degrees.

Inventive Thinking Scale:

Since one of the objectives of the current research is to reveal the effect of the educational program on the innovative thinking of the students, the researcher decided to choose the Guilford Scale for the innovative thinking of the researcher (Ryan Hashem) in order to fit this scale and the nature of the research, through conducting a number of personal interviews with the experienced and specialization in this field, and proved to be valid by (100%). The student's score is also calculated through her answers to each of the following:

1. Intellectual fluency: its degree is calculated by mentioning the largest possible number of uses.
2. Automatic flexibility: its degree is calculated by the variety of appropriate answers for the uses.
3. Authenticity: its degree is calculated by mentioning the uncommon answers, i.e. the rare and very rare ones.
4. Total score: It is measured by the sum of the degrees of fluency, flexibility, and originality.

The exploratory experiment of the mental fitness and innovative thinking scales:

The researcher conducted an exploratory experiment to measure mental fitness and innovative thinking on the sample of (5) female students, at exactly ten o'clock 18/10/2020 in the College of Physical Education and Sports Sciences, University of Kufa , as the mental fitness scale was distributed to the sample of the exploratory experiment in one of the classrooms the scale instructions and how to answer them were clarified according to the displayed sequence,after completing the answer to the paragraphs of the scale, the forms were collected and then a rest period was given for (10) minutes, and then the scale of innovative thinking was distributed to the sample itself, and the instructions of the scale and how to answer it were also clarified. The pilot experiment is:

1- Achieving the desired goals and creating a clear picture of the nature of work and how to implement it.

2- Knowing the suitability of the two scales to the level of the sample, as well as the clarity of its paragraphs.

3- Knowing the time taken to answer the paragraphs of each scale, ranging between (20-30) minutes.

4- Finding scientific coefficients for standards.

Scientific foundations for the two scales:

The validity of the two scales: The researcher used the apparent validity after presenting it to the experts and their agreement on the validity of the items of the two scales by 100%.

Reliability of the two scales: The researcher relied on the data of the

exploratory experiment sample, as the stability coefficient of the mental fitness scale and the innovative thinking scale was calculated using the Alpha Cronbach method. The stability coefficient of the mental fitness scale reached (0.895) and the stability coefficient of the innovative thinking scale was (0.872), and this indicates that the two scales enjoy a high degree of reliability.

Pre-tests:

The pre-tests were carried out on the research sample (the control group and the experimental group) on 11/11/2020 AD,as the mental fitness scale and the innovative thinking scale were applied in one of the classrooms, as mental fitness scale forms were distributed to the sample, and the researcher read the instructions to the sample members and explained the answer method after making sure that the sample was understood, the paragraphs of the scale were answered, and after the students finished answering, the forms were collected and their results were unloaded into special forms for ease of statistical work after giving a rest period of (10) minutes, the innovative thinking scale was distributed, and the researcher read the instructions to the sample members and explained the method of answering, after completion, the forms were collected and unloaded for the purpose of statistical processing. In order for the researcher work from a single starting line, and after the two groups were divided, the control and experimental research groups, and to ensure that there were no moral differences between those groups, he performed parity between the two groups in the tribal tests that included the mental fitness scale and the innovative thinking scale.

Table (1) shows the equivalence of the two research groups in the research variables:

Variables	Experimentalgroup		Controlgroup		T value	Error level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation			
Mentalfitness	42.11	10.591	40.090	10.272	1.673	0.101	Non sig
Innovative thinking	76.1	8.333	75.768	8.472	0.035	0.114	Non sig

Table (1) shows below the significance level (0.05) and the degree of freedom (18), and this indicates that there are no significant differences between the two groups in the variables investigated, meaning that the two research groups are equal in those variables.

Implementation of educational units according to Karen's model:

The researcher developed the educational units of Karen's model for the experimental group, which included (7) steps and in accordance with the topic and sample of the research, distributed over (14) educational units, with one educational unit per week, which were presented to the experienced and specialized, in order to benefit from their experience and observations about:

1. The validity of employing this model within the educational curriculum prepared for its development for the better.
2. The suitability of the activities, methods, means and exercises used for students.
3. The suitability of the number of units allocated to the model.

The application of the educational units of the Karen model began on Sunday, 15/11/20, at the rate of one educational unit per week, and the period of application of the educational units of the experimental group ended on Sunday, 7/1/ 2021. The educational unit and my agencies:

1. **The preparatory section**: its time is (15 minutes) per unit and it consists of:

A- **Introduction**: Standing in one line and performing the sports salute, with a time limit of (2) minutes.

B- **General warm-up**: It includes exercises and games in its various forms, which aim to raise the basic physical capabilities of the body, and its time is (3) minutes for one educational unit.

C- **Physical exercises**: It includes exercises that are related to the educational unit the subject of the lesson, that is, they are specific to certain muscle groups and take (5) minutes.

D- **Special warm-up**: It takes (5) minutes for one educational unit..

2. **The main section:** its time is (60 minutes) per unit, and it in turn consists of:

A. **Theoretical aspect (educational):**Its time is (20 minutes) for one educational unit and includes at the beginning a review of the information and skills that were learned in the previous educational unit, and then the school begins by clarifying to the students the title of the lesson today and what skills they want to learn and develop and what their goal is. Many illustrations are used, including flex and charts And concept maps and an explanatory video of skills in order to help deliver the material in a clearer and easier way, and then the teacher asks a set of questions and the discussion takes place among them..

B. **The practical section**:Its time is (40 minutes) for one educational unit and includes the application of what the students have learned in the educational aspect using various educational exercises that serve the skill learned in that unit and using the appropriate educational method for the model.

3. **Final Section**:Its time is (15) minutes for one educational unit and includes the recreational aspect, which contains calming exercises for the female students or a small game to activate the female students, in addition to giving some notes and feedback, then crystallizing the reached ideas and conclusions.

Post-test:

After completing the implementation of the educational units according to Karen's model on the research sample (the control group and the experimental group) on 10/1/2021 AD, the researcher worked to create the same conditions in which the pre-tests took place in terms of test time and the sequence of performance of the tests and using the same auxiliary tools with standardization The assistant work team in the two tests.

The statistical methods used in the research: - The SPSS statistical package was used.

- Mean.
- Std. Deviation.
- Alpha Cronbach equation.
- Simple correlation coefficient.
- Hypothetical Mean.

Presenting and discussing the results of the pre and post tests for the experimental and control groups in the research variables:

Presentation of the results of the pre and post-tests of the experimental group in the research variables, their analysis and discussion:

Table (2) shows the calculated (T) value and the level of error for the pre and post-tests of the experimental group in the two scales:

Variables	Pre-test		Post-test		F.Mean	F. Std. Deviation	T value	Error level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation					
Mentalfitness	42.11	10.59	75.848	12.19	56.73	12.96	7.46	0.000	Sig
Innovative thinking	76.12	8.333	92.25	10.49	42.79	8.56	5.96	0.000	Sig

Table (2) shows the values of the arithmetic means, standard deviations, and the calculated (t) value for the experimental group in the pre- and post-test. Through the values, we notice differences in the arithmetic means and standard deviations for all tests in order to find out the differences, the researcher used the t-test for the corresponding samples, and all values were significant because the error rate is less than (0.05), so there is a preference for the post tests.

The researcher attributes the moral differences between the pre and post-tests to the fact that the reason for the development of mental fitness and innovative thinking is due to the use of the Karen model, which emphasizes cooperative teamwork and giving responsibility to female students as well as suspense and excitement, and this in turn improves all dimensions of mental

fitness from social interaction, responsibility, challenge, happiness and others From the dimensions, as well as that Karen's model emphasizes making the female students the focus of the educational process and giving them the freedom to express their opinions without hesitation or fear. This was positively reflected on their level of mental fitness, "Since the steps of Karen's model are in line with modern trends in teaching, and these steps came in a sequential, integrated and interconnected manner, where each step plays a specific role in preparation for the next step".In addition, the model used by the researcher, which is (Karen's model), is characterized by achieving continuous interaction between the school and the student during the learning process, so that the learner is the center of the educational process through discussion, investigation and application[(2)].The researcher attributes the significant differences between the pre and post-tests of the attentional control scale to the effectiveness of the model used, which is (Karen's model), to the fact that the group members' acquisition of innovative thinking control is manifested in that it enables the individual to regulate and control his behavior and that the student is able to monitor it is itself that possesses positive internal directives towards the educational process.It is also the most capable of solving problems and facing the challenges imposed by educational situations, as self-monitoring can give the learner an opportunity to develop their learning methods and acquire better competencies for performance by demonstrating greater levels of ability and motivation [(3)].

Presenting the results of the pre and post-tests of the control group in the research variables, their analysis and discussion:

Table (3) shows the calculated (T) value and the level of error for the pre and post-tests of the control group in the two scales.

Variables	Pre-test		Post-test		F. Mean	F. Std. Deviation	T value	Error level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation					
Mental fitness	40.09	10.27	58.272	11.69	54.16	19.29	6.58	0.000	Sig
Innovative thinking	75.768	8.472	80.61	9.38	41.43	17.33	4.42	0.000	Sig

Table (3) shows the values of the means, standard deviations, and the calculated (t) value for the control group in the pre- and post-test. Through the values, we notice differences in the arithmetic means and standard deviations for all tests in order to find out the differences, the researcher used the t-test for the corresponding samples, and all values were significant because the error rate is less than (0.05), so there is a preference for the post-tests.

The researcher attributes the moral differences between the pre and post-tests among the members of the control group to

the nature of the educational method used by the subject school, which was clearly reflected on both the mental fitness and the innovative thinking of the students. “Since learning any skill, especially the complex skills that were addressed by the researcher in her research, requires a high degree of focus and attention, as well as mental fitness, as it enables the student to direct her attention to the important information and stop the information and stimuli that are not related to the task by delivering attention to them.” [(4)].In this way, the researcher agrees with what (Al-Amayrah 2002) indicated: “Putting the student in educational situations and atmospheres and providing an effective environment provokes him to achieve better performance, and that comes by helping him obtain information, skills and experiences in a scientifically studied and properly planned manner”. [(5)]

Presenting, analyzing and discussing the results of the post-tests for the control and experimental groups:

Variables	Experimental group		Control group		T value	Error level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation			
Mental fitness	75.848	12.19	58.272	11.69	7.37	0.000	Sig
Innovative thinking	92.25	10.49	80.61	9.38	6.61	0.000	Sig

Table (4) shows the values of the arithmetic means, standard deviations, and the calculated (t) value for the experimental and control groups in the post-test. Through the values, we notice differences in the arithmetic means and standard deviations for all tests and to find out the differences, the researcher used the t-test for independent samples, and all values were significant because the error rate is less than (0.05), so there is a preference for the experimental group.

The researcher attributes the differences between the experimental and control groups in the post-tests to the effectiveness of teaching according to Karen’s model, which enhanced the students’ involvement in generating and discussing ideas, which opened the way for them to have a deeper understanding and thus increased their achievement, as it led to an increase in the students’ prior knowledge in the cognitive structure, as with its increase, their ability to Addressing new experiences and situations they face, and thus an increase in innovative thinking[(6)]. As this was evident through the differences between the experimental and control groups and in favor of the experimental group whose focus was the use of the Karen model, as working with this model allows students to perform mental operations to compare the basic features of a concept present in the definition of the basic and variable features found in the explanation, in addition to that this The model is characterized by gradual steps in

the level of difficulty from the easiest to the most difficult, that is, in a sequential, interconnected and gradual manner, as the content is presented to the three (minimum) levels (knowledge, comprehension, application)[7].This contributed to the development of the students' abilities to organize the educational material and acquire it better than the traditional method in the teaching process. In addition to the use of modern methods and models in line with modern trends in the teaching process, which stimulated the students' thinking, drew their attention and aroused their motivation, and helped save time and effort in acquiring the learning process. This is consistent with what (Qatami:1998) stated that man tends to perceive wholes before the parts, and the acquisition process depends on awareness, attention, advice, readiness, and motives, and the acquisition process is a process linked to the teaching method that includes receiving and recording concepts [8].The involvement of the students in generating and discussing ideas helps lead them to a deeper understanding and thus increased their performance of skills, and also contributed to increasing the students' prior knowledge in cognitive stimulation, as with its increase, their ability to address new experiences and situations they face increases[9].

Conclusions and recommendations:

Conclusions:

1- Karen's model and the method used by the teacher contributed to the development of mental fitness and innovative thinking forfemale students.

2- The effect of the units prepared by the researcher on the experimental group, where it outperformed the control group in terms of mental fitness and innovative thinking for female students.

3- Karen's model made the student a main focus in the education process, as it led to positive interaction between female students and participation throughout the lesson period.

4- Using Karen's model helped the student to link the previous information with the new through a map of concepts, pictures, videos and illustrative charts that made the lesson more interesting and exciting and thus facilitated the development process.

Recommendations:

1- Adopting the educational units prepared according to the Karen model in mental fitness and innovative thinking for female students.

2- The necessity of paying attention to modern teaching models that carry with them methods based on behavioral and constructivist theories and meaningful learning that contribute to raising the level of students and developing the educational process.

3- Diversification in the teaching strategies and models used by the teacher in order to encourage female students to learn skills, get suspense and excitement, and stay away from boredom and monotony.

4- Emphasis on the need to pay attention to the intellectual aspect of learners and the use of teaching models that contribute to making the learner think and use his

mental abilities and develop his attention.

5- Make a booklet in which the learning units of the Karen model are placed to facilitate its implementation.

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