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The Influence of the Chiller Model on Achieving and Developing Proactive Motivation Among Female Students of the Institute of Fine Arts in the Theme of Aesthetics

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Abstract

The research pointed to reveal the effect of the Chiller model on achieving and developing proactive motivation among female scholars of the Institute of Fine Arts in aesthetic schooling. The study depended on the experimental system. The investigation model entailed of (30) female scholars from the Institute of Fine Arts - Al-Karkh First - Department of Design, from the second year female students. The investigation means were the mental attainment assessment and the proactive motivation measure formulated by (Zayzoun 2022). The study attained the subsequent conclusions:The sample members' cognitive achievement test mean scores show statistically significant changes in favor of the post-test at the significance level (0.05). The mean motivation scale scores of the sample members show statistically significant changes in favor of the post-test at the significant level (0.05). The effect size value was equal to (2.15), representing a large influence extent. The influence size value for the next dependent variable (motivation) was (2.75), and it also characterizes a large influence extent for the individual changeable on the contingent adjustable according to Cohen's classification of the amount Effect size.The influence of the Chiller standard on achieving and obtaining proactive motivation amongst female scholars of the Institute of Fine Arts in aesthetic schooling.

Keywords: *Chiller Model, Aesthetic Education, Proactive, Motivation, Impact.*

Introduction

This research aims to measure the effect of measuring the proactive motivation of art students regarding the sections and types of art and their cognitive tendencies. Through this research, the motivation of female students was measured by taking a sample about the subject of aesthetic education, and the results were reached. By reading their cognitive and practical artistic motivations, as the research problem aims to reach the student's motivations about art and his inclinations in terms of its types, fine art, and drawing. Sculpture. Music and reaching the student's motivation and studying the section he desires to achieve artistic results

Research Problem

The world today is observing tremendous development and cognitive progress, especially since development has begun to enter societies without permission, and this is an inevitable result of the accelerating technological revolution that our world is witnessing today. Therefore, the subject required the optimal investment of human capabilities and potential. This progress has needed a positive impact on students and modern education, as it seeks the technological development of learners and the development of their abilities to think, investigate, research, and create. Therefore, we decided to adopt new models, methods and means that assist learners educate themselves and grow their abilities to access information and use it in their lives.

"Learning and its relationship to education are amongst the requirements of constructing association's philosophy and development throughout individual growth and assembling it correctly. Therefore, learning has remained variable and developed in different shapes concurring to its dissimilar schemes through multiple experiences and experiments to attain the best models and various strategies and to serve discipline and schooling, these approaches required to emerge in the globe in their different shapes and schemes, so

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relying on scientific experience to define these forms was the main motivation for building them and using them in various forms, and searching for what is new and possible to apply and develop to suit the problems and find appropriate solutions during the application of any model and strategy" (Attiya, 2008).

The teaching methods controlled by the teacher must depend on some important foundations and standards, as well as the scientific experience that helps him make the educational situation successful. Therefore, the teacher must affect several appropriate classroom roles when implementing the teaching methods that he will choose, taking into account some considerations that contribute to their activation, including achieving the desired learning events for learners.

"Art education is considered one of the subjects that involve continuous renewal and development to keep pace with rapid developments. Therefore, experimenting with modern teaching methods would produce the level of students' performance and interaction with the classroom" (Al Amer , et al., 1986).

Given that the theme of aesthetic education is one of the curricular subjects in fine arts institutes, it is no less important than the rest of the academic subjects, so it was necessary to deal with it based on importance. Perhaps the first and most important sign of interest is obvious from the necessity of following modern methods, models, and strategies in teaching it.

Research Importance

- The significance of using modern methods, strategies, and models in teaching the subject of aesthetic education, including the Chiller model, because of its importance in facilitating the learning and teaching process.
- The present research may contribute to providing female students with the opportunity to expand their cognitive and mental knowledge.
- It may gain appropriate organizations (faculties and associations of fine arts, colleges of basic education whose programs include the subject of aesthetic education).
- Providing the library with the scientific attempt that allows us to recognize the effect of the Chiller standard in teaching the arts in general and aesthetic education in particular.
- The results that the research will reach can supply to developing knowledge among second-year female scholars in the theme of aesthetic schooling.
- The current research is a continuation of the study that dealt with the topics of modern teaching strategies, methods, and models and can benefit researchers and postgraduate students.

Study Target

The ongoing study targets to reveal the influence of the Chiller model on achieving and developing proactive motivation among female scholars of the Institute of Fine Arts in aesthetic schooling.

The study will be succeeded depending on the upcoming sub-targets:

- The consequence of the Chiller standard on the accomplishment of female scholars of the Institute of Fine Arts in aesthetic schooling.
- The effect of the Chiller model on evolving proactive motivation among female scholars of the Institute of Fine Arts.

Research Limits

The present study is restrained by the following limits:

- Objective limits: Chiller's model for attaining and developing proactive motivation

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- Time limits: The current study is planned for the 2023-2024 academic year
- Spatial limitations: Institute of Fine Arts / Baghdad Education Directorate / Al-Karkh Al-Awala / Iraq.
- Human Limits: Female scholars of the Institute of Fine Arts in the theme of aesthetic schooling / second stage/morning study.

Define Terms

First, The Achievement Model

Muhammad (2000) defined it as: "using a test to measure the achievement of students who want to distinguish their position and position among their friends" (p.9), and Obada (2001) described it as: "that level that the student has reached in achieving academic subjects" (p. 146).

Shehata et al. (2003) stated it as "the volume of evidences, knowledge, or talents that the scholar acquires, stated in marks through an exam with which specific levels can be measured" (p. 89), and Abu Jado (2003) defined it as "the results of what the student has learned after a certain period, which can be measured by the grades they obtain on achievement tests to know the extent of the success of the strategies developed and planned by the teacher, and what they obtain is translated into a grade." (p. 425)

Accordingly, the researcher expresses achievement procedurally as: (The amount of artistic information and methods attained by female scholars of the Institute of Fine Arts (the study example). Thinking skills are measured through the total score acquired through reactions to the entries of the achievement assessment prepared for this purpose).

Third: Proactive Motivation Was Defined By:

- (Crant and Ashford, 2008)

"Subjective behavior that involves visualization and planning aims to bring about variation that helps achieve a new future that has an impact on the individual and his environment" (p. 9).

(Parker, 2010)

"A target-determined progression that contains placing a proactive target and then determined to accomplish it, leading to a better future for the individual, others, and the environment" (p12)

(Presbitero, 2015):

"Self-initiative involving forthcoming-positioned engagements that aims to alter and progress oneself or one's present condition" (p525)

Accordingly, The Investigator Outlines Proactive Motivation Procedurally **as** the total result acquired from the students' answers to the test items prepared for the study.

Hypothetical Outline and Preceding Analyses

The First Axis: A Hypothetical Outline

(Henry Altshuller)

Henry Altshuller, a Russian researcher from Azerbaijan, was born in 1926 and died in 1999. He obtained a master's degree in mechanical engineering. He made his first invention when he was fourteen years old, and he started his research journey until he found himself working in the Navy's patent documentation

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department. He developed a device that helps him stay underwater for as long as possible. He determined that the development of inspiration and origination is an organized and non-random process. After that, he devised many papers on creative inventions and was interested in innovative problems that had no known solutions. He accomplished that achieving creativity means freedom from the contradictions of problem-solving (Obeidat and Suhaila, 2007).

Henry Altshuller developed a model in which he declared the steps to solve problems creatively according to the creative steps.

- Clearly describe the problem.
- Formulate the problem in terms of contradictions and what might cause from improving its characteristics.
- Look for previously resolved problems and be directed by standard technical indicators that lead to contradictions or conflicts.
- Finding known solutions that compute the problem under study and adapting these solutions to fit the existing problem (Zayer et al., 2013).

The researcher believes that Altshuller 's model is a way to assist students creatively solve problems by understanding the problem, examining all aspects of the problem, relying on previously solved problems as a guide to facing the difficulties facing these problems, and drawing conclusions in the final solution.

The Second Axis: Previous Studies

(Nouri, 2021): The Influence of The Instructive Place's Approach on The Accomplishment of Female Scholars of The Institute Of Fine Arts In The Theme Of Aesthetic Schooling.

The research aims to identify the power of teaching the aesthetic education subject using the educational station's strategy for female scholars of the Institute of Fine Arts in the aesthetic schooling subject. The researcher utilized the tentative method. The Fine Arts Department at the Institute of Fine Arts for Girls / Baghdad / Al-Karkh was arbitrarily chosen to be the investigation illustration, and the amount of female scholars in this hall was (38). The outcomes of this analysis revealed the existence of an impact of the instructive station's strategy as a method that can be used in teaching, especially in the subject of aesthetic education, due to its effectiveness in teaching this subject.

(Muhammad, 2019): The Consequence of Using the Shared Education Approach in Emerging the Cognitive Achievement of Scholars of The Institute of Fine Arts in The Subject of Aesthetic Schooling.

The study aimed to show the consequence of the reciprocal teaching approach in developing cognitive accomplishment in aesthetic education. The researcher used the experimental method. The Rusafa Institute of Fine Arts was chosen as a sample to fulfill the experiment. The student sample involved of (30) students. The results of the investigation presented that the students of the tentative assembly, to whom the content of the teaching plans was requested based on the reciprocal teaching strategy that dealt with topics from the aesthetic education subject assigned to the scholars of the second year - Department of Fine Arts, excelled in their answers to the items of the cognitive accomplishment assessment, pre-post, in favor of the post-test.

(Hassan, 2018): The Character of Aesthetic Schooling in Developing Inspired Rational Talents Amongst Female Scholars of The College of Community Advance at Al-Nilein University as A Standard

The investigation aimed to identify the character of aesthetic schooling in developing inspired rational talents amongst female scholars of the College of Science Advance at Al-Nilein University. The academic utilized illustrative and quasi-tentative methods. The inspection tool was an achievement test, adherence, and applying a thinking schedule to gather evidence. The investigation sample involved of (50) female scholars at the College of Community Advance at Al-Nilein University. The outcomes of the analysis

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revealed the efficiency of the teaching agenda in explaining inspired thoughtful competencies amongst female scholars.

(Al-Sulaili, et al., 2012): The Outcome of Teaching the Art Education Subject Using Stories for The Eighth Class in Developing Inspired Rational and Vision

The investigation targets to identify the influence of philosophy the art schooling subject using stories for the eighth class in developing inventive thoughtful and inventive creativity in the State of Kuwait. The researcher used the experimental technique in his research procedures. The study implements entailed of a cognitive accomplishment assessment in science and a creative thinking test. The sample contained of all eighth-class students, numbering (650) male and female scholars, allocated into two experimental and domination sets. The outcomes of the analysis concluded that the arithmetic average of the scholars who inspected using the story in the three inspired rational talents (articulacy - suppleness - innovation) was the highest. There were statistically significant variances between the averages of the functioning of the two investigation sets on the creative thinking post-test because of the teaching scheme (the story - the technique) normal in favor of the tentative set.

The effect of the school atmosphere scheme on emerging the inspired and plastic standards of the art schooling subject in the secondary stage from the point of view of female educators - Umm Al-Qura University - Saudi Arabia

(Al-Shalti, et al., 2010): The Influence of The School Atmosphere Scheme in Emerging the Original and Plastic Standards of The Art Schooling Subject in The Secondary Stage from The Point of View of Female Educators.

The study aimed to identify the school environment system and the size of its impact on developing the creative values of contemporary plastic art among female secondary school students. The academic used the expressive method in her research techniques. The inspection implement was a questionnaire as a measurement tool, and it consisted of (64) elements allocated along four axes. The study sample involved of (51) female secondary school art education teachers. The outcomes of the investigation presented the following: The teachers maintain a high role, and this is due to the small number of artistic classes that fail to link artistic performance to contemporary issues and lack of cooperation from the teaching staff in giving training courses on activating the role that the environment plays in revealing the values of creativity.

Research Practice and Procedures

Research Practice

In this study, the investigator assumed the tentative method with minimal domination (Design with Minimal Control), called the one-group design with pre-and post-tests, because it achieves the goal of the research, which aims to reveal the influence of the Chiller model on the accomplishment and development of proactive inspiration amongst female scholars of the Institute of Fine Arts in Aesthetic education theme.

Experimental Scheme

Since the academic implemented the tentative method in creating her processes, the one-group design with two tests (pre-post) was chosen because this type of design is considered appropriate for the conditions of the current research and what accompanied conducting the experiment at the Institute of Fine Arts and achieves the goals that it was set to achieve as well. Table (1) shows the tentative scheme of the existing exploration.

Table 1. Tentative Design in the Present Work.

The tentative Set	Post-cognitive accomplishment test	The independent variable	Proactive motivation scale test	The dependent variable

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		Chiller model	**Before-after**	**Collection Developing proactive motivation**

Investigation public

The existing exploration population was represented by female scholars in the second year of fine arts institutes for girls, for the academic year 2023-2024. The researcher surveyed to define the community, as the total number of female scholars in the second year reached (656) students distributed among (7) institutes of fine arts.

The Research Sample

Basic Sample

Because the present study population is controlled to the second-year female scholars of the Institute of Fine Arts, the research group was chosen by random method, and was represented by the second-class female scholars of the Design Department, Al-Karkh First Institute, who numbered (30) students, as shown in Table (2):

Table 2. Research Sample.

Institute	Department	Class	Basic sample	No. of Students
First Institute of Fine Arts, Karkh	Design Department	Second	Experimental group	30

Exploratory Sample: through which the problem was identified and needs classified, it was applied to the female scholars of the Institute of Fine Arts - Al-Karkh 1 - third-year female students.

A Sample for Constructing Tools: One of the requirements for experimental research is that there be an examining study that will benefit the research by identifying many of its requirements, including examining the research tools, (cognitive achievement test). Therefore, an exploratory sample of (60) female students from the Institute of Fine Arts Diyala was adopted. "Apart from the study sample who is investigating the subject of aesthetic education, the study means were implemented to determine the reliability coefficient, the difficulty coefficients, and the preference of the paragraphs.

Table 3. Types Of Research Samples.

No.	Sample type	Numbers
		Information
1	The exploratory sample of the open questionnaire on the subject of aesthetic education.	Applied on 30 students
2	Sample tooling construction and test inspection	It was applied on 60 second-year students at the Institute of Fine Arts - Diyala.
3	Basic sample	Applying the experiment: The primary research sample was 30 students, represented by the cognitive achievement test.

Research Tools

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First: Cognitive Achievement Test

The process of constructing achievement tests is one of the vital procedures in constructing teaching plans, provided that the questions in the cognitive achievement test cover the largest possible amount of the cognitive structure according to the test map (table of specifications), which is the detailed plan that defines the educational content of the test and links the content to the objectives. Interactive education at its various levels, and shows the relative weight of each topic and determines the number of questions for each part of it. The target of the specifications table is to achieve balance in the exam and to ensure that the test is a representative sample of the teaching objectives and the content of the subject that the achievement is intended to measure..." 37, 108)

Preparing A Table of Requirements (Exam Chart)

The test map "is the procedure carried out by the researcher in her analysis of the matter of the instructive substantial, and the formulation of interactive purposes, thus deciding on the type of items to put in the accomplishment assessment." (44, 534).

The academic controlled the number of goals, through the levels of behavioral goals, which consisted of (39) cognitive goals from Bloom's classification for the six levels: knowledge (11 goals), comprehension (6 goals), application (5 goals), analysis (6 goals), synthesis (6 goals), evaluation (5 goals) and Table No. (4) shows this:

Depending on these objectives, the relative weight of each level of behavioral objectives was extracted using the following equation:

$$\textbf{The relative weight of the level of goals} = \frac{\textbf{Number of behavioral objectives per level}}{\textbf{Total number of behavioral goals}} * \textbf{100\%} \quad \textbf{(1)}$$

The equation below was utilized to obtain the distribution of questions on each topic:

$$\textbf{Distribute questions on each topic} = \textbf{Number of paragraphs} * \frac{\textbf{Relative importance}}{\textbf{100}} \quad \textbf{(2)}$$

Table 4. Specifications For the Achievement Test (Test Map).

Subjects	No. of pages	Relative importance	Goal levels						Total questions
			knowledge	Absorption	Application	Analysis	Installation	Assessment	
			28.2%	15.4%	12.8%	15.4%	15.4%	12.8%	100%
First	3	14%	1	1	0	1	0	0	3
Second	4	18%	1	1	1	1	1	1	6
Third	4	18%	1	1	1	1	1	1	6
Fourth	4	18%	1	1	1	1	1	1	6
Fifth	4	18%	1	1	1	1	1	1	6
Sixth	3	14%	1	1	0	1	0	0	3
Sum	22	100%	6	6	4	6	4	4	30

From the above, the researcher formulated the cognitive achievement test on the subject of aesthetic education within the curriculum book for the second-grade - design section. This test consisted of several

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questions that included a group of paragraphs, and it is of the type of objective test from (1-30). The distribution of the question paragraphs was determined according to the needed academic subject. Point (1) was assigned for the accurate response to one question and (0) for the incorrect answer or no response. Therefore, the final grade that the students achieve after answering is equal to (30) marks. A solution for the correct answer has been provided.

Honesty Index

Virtual Honesty

The achievement test was presented in its preliminary form to a set of experts in art education, approaches of imparting arts, extent, and assessment, to determine the strength of the test items its ability to measure the goals that were set to be measured.

The test consisted of (30) questions that could be used to determine the goal it was set to measure. All test items obtained an acceptance rate of 92% or more. Thus, all test items were considered valid, as no items were deleted except for some very minor linguistic modifications to some of them.

Statistical Examination of the Accomplishment Test Substances

Reconnaissance Application

The researcher requested the assessment to a sample of (60) students from the Institute of Fine Arts-Diyala who are examining the theme of aesthetic education. This request aims to identify the psychometric features and validate the legitimacy of the matters. After requesting the test, the researcher did the following:

- Correcting answers.
- The data was organized in descending order and divided into two groups, the highest and the lowest.
- Choosing the answer sheets for the top 50% and bottom 50% of the female students.

After that, paragraphs were analyzed to obtain the difficulty factor, the strength of preference of the paragraphs, and the effectiveness of the alternatives.

- **Difficulty Factor Indicators**

The percentage of precise answers for each paragraph was calculated, where a high percentage indicates the ease of the paragraph and a low percentage indicates the complexity of the section. The complexity feature formula was utilized to calculate the difficulty of each paragraph. It appeared that the difficulty index for the cognitive achievement test questions (1-30) ranged between (0.43-70). This percentage is a good indicator of the authority of the cognitive achievement test, "as Bloom verifies that if the difficulty of the paragraph is between (0.20) and (0.80), then the test is good." (17, 107)

- **Preference Index for Test Items**

The researcher assigned a random sample of (60) students for the preference sample with the upper 27% and the lower 27% to find the preference index for the test items using the preference coefficient equation. The results identified that the question items (1-30) were in the range of (0.0.70), and this indicator indicates that all items in the cognitive achievement test are discriminable. Ebel considers that "the assessment details are good if the strength of their distinction is (0, 30) and more" (85, p:6), and Table (5) explains this.

Table 5. The Difficulty and Preference Coefficient for the Cognitive Achievement Test Items.

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No.	Number of answers		Difficulty	The power of identification	No.	Number of answers		Difficulty	The power of identification
	True-Upper	True-Lower				True-Upper	True-Lower		
1	22	7	0.48	0.5	16	27	11	0.63	0.53
2	25	11	0.6	0.47	17	26	13	0.65	0.43
3	24	13	0.62	0.37	18	25	9	0.57	0.53
4	27	12	0.65	0.5	19	21	8	0.48	0.43
5	23	7	0.5	0.53	20	27	12	0.65	0.5
6	22	10	0.53	0.4	21	25	7	0.53	0.6
7	28	13	0.68	0.5	22	21	9	0.5	0.4
8	21	7	0.47	0.47	23	28	14	0.7	0.47
9	20	8	0.47	0.4	24	24	10	0.57	0.47
10	26	13	0.65	0.43	25	23	11	0.57	0.4
11	23	9	0.53	0.47	26	21	5	0.43	0.53
12	28	11	0.65	0.57	27	26	11	0.62	0.5
13	27	9	0.6	0.6	28	24	7	0.52	0.57
14	26	12	0.63	0.47	29	26	14	0.67	0.4
15	22	10	0.53	0.4	30	25	9	0.57	0.53

The Effectiveness Factor of Incorrect Alternatives

On tests with multiple-choice items, for an item to be good, the test designer must inspect students' answers to each choice in the item and obtain negative values for incorrect choices. For the paragraph to be good, that is, the number of students ((lower group)) who choose the wrong choices or answers must be more than the number of students ((upper group)) who choose the wrong alternatives. The researcher initiate a coefficient of effectiveness of the incorrect alternatives to the test items for questions from (1-30) and found that all the items had a negative answer, and this pointer provides an obvious depiction that all the alternatives to the things are effective and Table (6) shows this.

Table 6. The Efficiency of Wrong Substitutes to the Cognitive Accomplishment Assessment.

No.	Upper group answers	Lower group answers	Effectiveness of the alternative -1	Upper group answers	Lower group answers	Effectiveness of the alternative -2	Upper group answers	Lower group answers	Effectiveness of the alternative -3
1	3	9	-0.2	5	8	-0.1	0	6	-0.2
2	3	6	-0.1	2	6	-0.13	0	7	-0.23
3	0	4	-0.13	0	3	-0.1	6	10	-0.13
4	3	9	-0.2	0	5	-0.17	0	4	-0.13
5	3	8	-0.17	4	12	-0.27	0	3	-0.1
6	4	8	-0.13	4	7	-0.1	0	5	-0.17
7	0	5	-0.17	2	4	-0.07	0	8	-0.27
8	4	9	-0.17	2	6	-0.13	3	8	-0.17
9	6	10	-0.13	3	5	-0.07	1	7	-0.2
10	0	3	-0.1	0	5	-0.17	4	9	-0.17
11	2	6	-0.13	4	8	-0.13	1	7	-0.2
12	0	3	-0.1	2	7	-0.17	0	9	-0.3
13	0	8	-0.27	2	6	-0.13	1	7	-0.2
14	2	6	-0.13	0	5	-0.17	2	7	-0.17
15	5	7	-0.07	0	4	-0.13	3	9	-0.2
16	2	8	-0.2	0	5	-0.17	1	6	-0.17

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17	0	3	-0.1	4	10	-0.2	0	4	-0.13
18	0	7	-0.23	2	6	-0.13	3	8	-0.17
19	5	11	-0.2	1	4	-0.1	3	7	-0.13
20	1	7	-0.2	0	4	-0.13	2	7	-0.17
21	3	12	-0.3	0	5	-0.17	2	6	-0.13
22	5	10	-0.17	1	4	-0.1	3	7	-0.13
23	0	5	-0.17	2	6	-0.13	0	5	-0.17
24	2	6	-0.13	4	10	-0.2	0	4	-0.13
25	2	4	-0.07	2	6	-0.13	3	9	-0.2
26	3	5	-0.07	5	11	-0.2	1	9	-0.27
27	0	6	-0.2	4	8	-0.13	0	5	-0.17
28	3	9	-0.2	0	4	-0.13	3	10	-0.23
29	0	4	-0.13	1	4	-0.1	3	8	-0.17
30	1	7	-0.2	3	9	-0.2	1	5	-0.13

Test Stability

To compute the dependability of the accomplishment assessment, the academic utilized the Keuder-Richardson method 20. The researcher accepted the interior reliability method in discovering the reliability of the assessment, which is a technique that varies on the association between the tests matters with each other and is one of the most widely used equations to locate the interior stability of the test. It is (the Keuder equation - Richardson 20) and by requesting it, the researcher found that the reliability value is (0.88), and hence it is studied a good value and therefore the test is considered stable. As shown in Appendix (11).

Statistical Indicators for The Achievement Test

Calculating statistical indicators to examine achievement and arrive at application results later.

The researcher is requested to utilize the statistical bundle, or what is named short (SPSS), to remove these statistical signs, and Table (7) shows this.

Table 7. Statistical Indicators for the Achievement Test Exploratory Sample.

Statistical indictors	Values	Statistical indictors	Values
Sample	60	Standard error of skewness	0.309
Arithmetic mean	15.22	Kurtosis	-1.031
Median	13.5	Standard error of kurtosis	0.608
Mode	9	Range	24
Standard deviation	6.924	Lowest value	5
Variance	47.94	Highest value	29
Skewness	0.343	Sum	913

Second: Measure of Proactive Motivation

- It can be relied upon to calculate the behavior to be measured.
- The degree of reliability and validity of the scale was high, and this provoked the researcher to adopt it if it reached reliability by the retest method (80%) and by Cronbach's alpha method (83%).
- It was new at the time of its preparation.

For this scale to add the characteristics of society, the researcher followed the steps:

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● *Planning For the Scale*

After reviewing preceding studies and measures that dealt with this concept and defining it theoretically and empirically, the researcher recognized two areas of measures of proactive motivation. They are: (1- Proactive behavior 2- Proactive goal generation: (visualization and planning).

●*Preparing paragraphs*

After the experts and arbitrators decided on the areas of the proactive motivation scale, the items, and then carefully reviewed the items to exclude duplicate items that do not measure the area that was identified.

The paragraphs were collected based on the following procedure:

A survey questionnaire was related to a sample of (30) female scholars at the Institute of Fine Arts who were chosen randomly.

It was based on the (Zayzoun) scale associated to proactive motivation, and it was reformulated to fit the current scale, with its two domains. Thus, (40) items were obtained, and distributed over the first field, which is proactive behavior (14), and the second field, which is proactive goal generation, which contains visualization (13) and planning (13).

Scale Correction

The researcher accepted the Likert method in the proactive motivation scale, as it consists of a five-point scale in front of each item, starting from (always) to (never), and the positive items were given the following weights: (5) grades for the alternative (always) and (4) grades for the alternative (often), (3) points for the alternative (sometimes), (2) points for the alternative (rarely), and (1) point for the alternative (never). The scores are reversed in the case of negative items, starting from (1) point for the alternative (always) and ending by (5) degrees for the alternative (Never), (5) degrees for the alternative Always - (4) Often - (3) Sometimes- (2) Rarely - (1) Never.

●*Honesty*

•*Virtual validity*

The researcher offered the items of the Proactive Motivation Scale in its initial form (40) to the professionals and arbitrators at the College of Fine Arts and the Department of Art Education and Psychology, to judge the items of the scale that were arranged to quantify it, and to express their opinions and explanations to evaluate the items and judging them in terms of whether they are valid or invalid with mentioning what was appropriate about rephrasing some of the paragraphs that need to be amended, and after presenting the scale to the experts and expressing their opinions and comments on the paragraphs, the (researcher) assembled the opinions and analyzed them using the percentage and kept the paragraphs that obtained a percentage of (80%) or higher because this percentage is evidence to accept these paragraphs.

Statistical Examination of The Matters of the (Proactive Motivation) Scale

Construct Validity

The academic confirmed the rationality of the hypothesis by relying on several pointers, specifically the correlation of the item score with the total score of the scale, the correlation of the total score of the item to the field to which it belongs, and the correlation of the scale areas with each other.

First	Second	Third

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No.	Value of the correlation coefficient for proactive behavior	No.	Value of the correlation coefficient for generating proactive goal perception	No.	Value of the correlation coefficient for proactive goal generation (planning)
1	0.8	1	0.67	1	0.82
2	0.75	2	0.91	2	0.81
3	0.82	3	0.88	3	0.77
4	0.71	4	0.84	4	0.71
5	0.66	5	0.73	5	0.8
6	0.81	6	0.87	6	0.74
7	0.81	7	0.77	7	0.66
8	0.7	8	0.68	8	0.77
9	0.79	9	0.69	9	0.8
10	0.62	10	0.74	10	0.7
11	0.74	11	0.72	11	0.71
12	0.82	12	0.75	12	0.69
13	0.72	13	0.55	13	0.71
14	0.85	14		14	

Table (10) shows that the values of the association coefficient of the item score with the total score in the arena to which the statistical significance belongs are when related to the value of the correlation coefficient, which amounted to (0.098). This indicates that the item calculates what the total score measures.

The Relationship of The Field Score to The Overall Score

To compute the correlation of the correlation areas of the proactive motivation scale, the academic utilized (Pearson correlation coefficient). The outcomes performed as summarized in Table (11):

Table 11. Correlation Coefficient Values of The Domains of The Proactive Motivation Scale With Each Other.

No.	Domains	Correlation coefficient
1	Proactive behavior	0.98
2	Proactive goal generation (visualization)	0.97
3	Proactive goal generation (planning)	0.97

It is clear from Table (11) that all values of the association coefficient of the scale domains among themselves were statistically significant when we associate them to the critical value of the association coefficient, which reached (0.19), which means that the scale domains are consistent among themselves in measuring the same variable.

Psychometric Properties of The Proactive Motivation Scale

Reliability: Reliability Was Calculated Through:

Cronbach's Alpha

Reliability was separated in this way from the survey sample test scores of (60) and utilizing the Cronbach equation, the alpha coefficient reached (0.98), which is a good reliability coefficient.

The reliability coefficient of the Cronbach scale is presented in Appendix No. (10)

- *Statistical Indicators for The Proactive Motivation Scale*

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By observing the values listed in Table (12), it is obvious that the grades acquired by the sample members are distributed moderately. Thus, it can be said that the results obtained from the research sample can be generalized to the general population.

Table 12. Statistical Indicators for The Exploratory Sample of The Motivation Scale

Statistical indictors	Values	Statistical indictors	Values
Sample	60	Standard error of skewness	0.309
Arithmetic mean	133.5	Kurtosis	-401
Median	131	Standard error of kurtosis	0.608
Mode	129	Range	130
Standard deviation	29.92	Lowest value	59
Variance	895.1	Highest value	189
Skewness	-328	Sum	8007

*Statistical Methods***:** The academic utilized the subsequent statistical approaches using and assisting with the statistical package (SPSS).

Presenting And Interpreting the Results

The First Hypothesis: (There are no statistically significant variances at the level of significance (0.05) between the mean scores of the female scholars in the tentative set who learned based on the Chiller model and the hypothesized mean of the test).

To confirm the validity of the null hypothesis, the sample members were subjected to a post-test cognitive achievement test, and their scores for the post-test were marked. The academic utilized the T-test equation for one interconnected sample of the posttest to remove the value of the arithmetic mean of the difference between the standard mean of the posttest and to identify the calculated (t) value and compare it with the tabular value to identify the differences between the scores of the tentative set in the posttest accomplishment test, as shown in Table (1).

Table 1. Outcomes Of The T-Test for One Sample in The Post-Achievement Test.

Achievement test	Number of female students	Arithmetic mean	Standard deviation	Hypothetical mean	Value (T-test)		Statistical significance at the 0.05 level
					Calculated	Tabulated	
Post evaluation	30	21.03	5.70	15	5.795	2.45	Statistically significant

It is weel-defined from Table (1) that the arithmetic mean of the tentative set's scores in the post-test is equal to (21.03) and that the computed T-test value is equal to (5.795), which is greater than the tabulated value of (2.45) at the significance level of (0.05) and with a degree of freedom (29). Thus, the null assumption is rejected, and the substitute hypothesis is accepted, which expresses that there are statistically significant differences at the significance level (0.05) between the average scores of the sample members in the cognitive achievement test, in favor of the post-test.

The Second Hypothesis: (There are no statistically significant differences at the level of significance (0.05) between the average scores of the female scholars of the tentative group who inspected according to the Chiller model in the pre-and post-proactive motivation scale)

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The academic utilized the T-test equation for two related samples to extract the value of the arithmetic mean of the difference between the two means and to identify the computed (t) value and compare it with the tabular value to identify the differences between the scores of the tentative set in the proactive motivation test (pre-post), as shown in the Table (2).

Table 2. Outcomes Of The T-Test for Two Correlated Samples on The Proactive Motivation Scale (Pre-Post).

Achievement test	Number of female students	Arithmetic mean	Standard deviation	Value (T-test)		Statistical significance at the 0.05 level
				Calculated	Tabulated	
Prior evaluation	30	-40.07	29.68	-7.395	2.45	Statistically significant
Post evaluation						

It is obvious from Table (2) that the arithmetic mean of the alterations between the pre-and post-tests is (-40.07) and that the calculated T-test value is equal to (-7.395), which is higher than the tabulated value of (2.45) at the level Significance (0.05) and with a degree of freedom (29). Thus, the null assumption is rejected, and the substitute hypothesis is accepted, which states that there are statistically significant alterations at the significance level (0.05) between the average scores of the sample members on the motivation scale, in favor of the post-test.

The Size of The Effect of The Independent Variable on The Two Dependent Variables

To extract the result size significance for the self-determining variable in the two contingent variables, the researcher adopted the effect size equation (d). The effect size value was equal to (2.15), representing a large effect size. The effect size value for the second dependent variable (motivation) was (2.75), which also characterizes a large effect of the independent variable on the dependent variable according to Cohen's classification of the magnitude of the effect size, and Table (2) shows this.

Table 3. Cohen's Classification of Effect Size.

Amount of effect	Small	Middle	Big
Value	0.20-0.50	0.50-0.8	0.80 or more

Interpretation of the Results

The scholars of the tentative set to whom the content of the teaching plans was pertained based on the Chiller model, which allocated with topics from the aesthetic schooling subject assigned to second-year female scholars - the design section, excelled in their answers to the items of the cognitive achievement test in favor of the post-test. This is due to the development of organizing the educational experiences that it included these plans, in addition to the advantages and importance of the Chiller model, which made female students the focus of the educational process.

The ability of the Chiller model to assist female learners acquire the cognitive information required for the second grade in the subject of aesthetic education among the students of the experimental group, which was reflected in the development of cognitive achievement through their answers to the test items prepared for this purpose.

The size of the influence that the Chiller model had on the female students of the experimental group (research sample) (2.15) represents a good indicator indicating the impact of this model on cognitive achievement in the subject of aesthetic education among female students.

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It is clear from the results reached by the researcher that the study plans planned according to the Chiller model in teaching the subject of aesthetic education have a positive impact on achievement and the development of proactive motivation among second-year female students, as the study plans prepared for the current research according to the Chiller model present the subject easily. It denotes the learners directly, and emphasizes the basic concepts within the academic subject, in addition to the plans containing a set of evidence and enriching activities, which motivate the learners and raise their motivation towards developing cognitive achievement, and give them immediate feedback on the results of their learning, which contributed to raising the scientific level in the aesthetic education subject.

Recommendations

Based on the results of the present research, the researcher recommended the following:

- Adopting the Chiller model in teaching the theme of aesthetic education because it has proven its effectiveness in creating cognitive educational experiences regarding the cognitive content.
- Training of male and female teachers of aesthetic education in courses on how to use the Chiller model as it is one of the modern teaching models that acquire metacognitive skills.
- Pay attention to modern teaching methods because they make the learner concentrate on the educational process.
- The necessity of running an exciting educational environment by the Ministry of Education and Higher Education aims to develop the mental abilities of female students.

Proposals

In addition of the current research, the researcher proposed conducting the following studies:

- The effectiveness of the Chiller model in other academic themes that focus on the cognitive aspect.
- The Chiller model and its impact on increasing the handicraft skills of students in the Department of Art Education.
- Engaging the Schiller model in developing critical thinking among female students at the Institute of Fine Arts in the Elements of Art subject.

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