The Impact Of Using Metacognition Strategies In The Development Of Fine Arts Students Performance - Wasit University.

Dr: JAWAD KADHIM MOHAMMED HUSAINE

Lecturere Of Curricula And Teaching Methods In Artistic Education Dept., Fine Arts Facutly - Wasit University

Research Summary

The current research aims at defining the relations among the metacognition strategies and the development of fine arts students performance, and detecting the expected response practices according to the teaching model strategies.

To archive this goal the researcher designed a teaching model based on the metacognition thinking basic skills and this teaching model involved many points (objectives, accompanying activities, students response indicators). The researcher applied a dimensional arbitration standard consists of the metacognition thinking basic skills (planning - monitoring - assessments) of students (the research sample). Consisting of 40 students (20 males - 20 females) in the third stage of artistic education dept. - Fine Arts Faculty - Wasit University). to know the extent of development in students performance.

Results indicated the presence of hypothesis of statistical significance in all students skills of "planning - monitoring - evaluation" associated with metacognition strategies for the dimensional performance of the used standard.

The main recommendations called for conducting several studies about designing strategies, training and educational programs to employ the metacognition skills in education field, as well as, designing and planning educational programs in the art education whose goals are based on metacognition skills.

Introduction:

Humanity faces today, unprecedented scientific and informative revolution, which requires the presence of a solid scientific rule, which qualifies our students to cope with the rapid changes which we experience, and make them participate this rapid change sweeping the world.

Everyone has huge potentials which help him solve his personal problems and his society problems, but the reason for art achieving this ambition, lies in the fact that one is not aware of his mental abilities which qualify

him to do a lot, rather than ones laziness or feeling of hatred towards his society.

Hence metacognition skills which resemble the implementation processes came to enable one to plan and forecast his mission and report the extent of success in implementing the proposed plans, Hence he assess the success of the plan after completing the learning activities.

Metacognition term involves this process by which one can be aware of his private thinking processes, and have the skill to use orienting processes for thinking in a more effective way.

Metacognition thinking involves a lot of approaches, where the sequence of these skills reasonably organises teaching and learning processes thus, motivates the learner - during practising art education fields to research, experiment and explore the results away from the restrictions of traditional learning in dealing with the information and subjects related to art education practices.

Research problem:

Art education relies on the teachers ability to push the students towards experimentation and exploration in the field of art, thus, assessment and amendment processes in this field are done in light of the students results associated with creative abilities.

In this context, a lot of art teachers may not have the methodology to push the students towards learning through the metacognition skills in artistic education practices which lead to learning incentive mechanisms to innovated away from rashness to assure a community skills to face difficulties and think of alternatives and competeveness based on co-operation.

Thus the research problem may be defined via the following questions:

(1) What's the impact of employing a teaching model based on metacognition strategies relevant practices in the development of fine arts faculty students performance of planning skills.

(2) What's the impact of employing a teaching model based on metacognition strategies relevant practices in the development of fine arts faculty students performance of monitoring skills.

(3) What's the impact of employing a teaching model based on metacognition strategies relevant practices in the development of fine arts faculty students performance of assessment skills.

(4) Are there any differences with statistical significance between male and female students "the research sample" in their practices of "planning, monitoring, and assessment skills" related to metacognition skills.

Research hypotheses:

1- There are differences with statistical significance differences at level (0.05) in the performance of metacognition strategies relevant

planning skills of artistic education dept. students - Faculty of Fine Arts - Wasit University

2- There are differences with statistical significance at level (0.05) in the performance of metacognition strategies relevant monitoring skills of Artistic education dept. students - Faculty of Fine Arts - Wasit University.

3- There are differences with statistical significance at level (0.05) in the performance of metacognition strategies relevant assessment skills of artistic education dept. students - Faculty of Fine Arts - Wait University.

4- There are no difference with statistical significance at level (0.05) in the performance of male and female students (the research sample) in their practices of metacognition strategies relevant "planning, monitoring, and assessment skills".

Research Objectives:

1- Defining the relations between the metacognition strategies and the development of fine arts students performance.

2- Finding the student expected response indicates in artistic education practices according to the teaching model mechanisms based on metacognition strategies.

The Importance of the Research:

– Development of planning mechanisms for teaching in artistic education dept. via employment of metacognition thinking skills in artistic education practices.

– Participating in defining approaches for artistic education teachers to motivate students to make experiments and discoveries according to a defined model which push them towards innovation via introducing the metacognition thinking skills in artistic arts practices.

Research limits:

– Place: Faculty of Fine Arts - Wasit University.

– Time: Academic Year (2018-2019).

– Subjects: Developing a teaching model employing the metacognition strategies in the development of artistic education students performance.

Research sample:

- A random sample of artistic education dept. - third stage - fine arts faculty - Wasit University - 40 students (20 male students - 20 female students) according to the one group system.

Research tools:

Survey: presenting the teaching model to a survey board includes:

− Proposed metacognition thinking skills, in the field of art education and drafting the goals of each, as well as, laying down educational activities for each skill.
− (CBreka 2007) criterion.
− To find out how far the students performance developed (research sample).
− The criterion consists of three basic skills for metacognition thinking. (planning - monitoring - assessment). and each skill includes (10 paragraphs) thus the criterion includes 30 paragraphs.

Research Methodology:
The research followed the descriptive method steps to study and analyse the metacognition thinking skills, as well as, following semi-experimental method steps when applying the teaching model and Breka criterion on the "research sample".

Research steps:
First: The theoretical framework which consists of 6 main points.
− Pint 1: Metacognition thinking
− Pint 2: Metacognition contents.
− Point 3: Theories and viewpoints explaining the metacognition strategies.
− Point 4: Metacognition thinking skills and learning process.
− Point 5: Metacognition skills training.
− Point 6: The role of teacher and learner in developing metacognition skills.

Second: Practical framework, it includes:
1. Defining the research sample from the fine education dept. students - Fine Art Faculty - Wasit University - 40 students (20 males - 20 females).
2. Anterisn application of Brika criterion to the research sample.
3. Designing of the teaching model based on the metacognition strategies to develop the performance of the fine-education students.
4. Conducting a survey for this model to know how far his points are true and valid.
5. Applying the teaching model to the research sample.
6. Posterior application of Brika criterion to the research sample.
7. Analysing the results of the survey and comparing the anterior performance of the sample with the posterior one.
8. Verifying the correctness of the research hypotheses and drawing results.
9. Drafting the research recommendation and proposals.

Research Terms:
- Metacognition:
It means one's awareness of his cognitive processes and its results, and the characteristics of the nature of his information, and everything related to it like:
The priorities suitable to learn information which are based on organising and controlling these processes in light of cognitivness, and it also includes consign planning, selecting, monitoring and assessing to the strategies to employ the procedural cognition to know the extent of progress towards achieving the goal.

- Theoretical framework:
- Metacognition thinking:
Metacognition term is bases on psychology and "William Janes" and "John Duvey" have described metacognition processes including meditation and which implies the metacognition skills and abilities, they also indicated that metacognition thinking is based on two stages of developments in the sixties of the last century.
Stage 1: Growing attention to the verbal moderation processes during cognition and focusing on the use of inward and outward language in all situations during performing the task.
Stage 2: The technology revolution and the growing attention to the computers and the cognitive systems derived from it which gave prominence to the "Smith theory" known as the information processing theory.
Metacognition may be attributed to the professor of psychology at Stanford University "Flavell" who was the first to use metacognition term in educational research via his writings about improving child's ability to remember.
Metacognition includes 3 different aspects:
- One's awareness of his cognitive processes and its result, one's awareness to priorities suitable to learn information, fixing and organising the cognitive processes.

Flavell introduced metacognition concept according to three dimensions.
- The first dimension: one's variables knowledge.

Hence, metacognition is any mental activity which direct, monitor, assess, organise, and review.
Metacognition refers to internal knowledge, and internal information treatment, it also refers to how one thinks and control his processes.
Metacognition is a thinking pattern and play an effective role in developing individuals abilities and it can be promoted by learning and teaching.

Metacognition Components:

Metacognition is divided into two main components:
- Component 1: Self-awareness of knowledge.
  This component includes 3 main types of knowledge:
  1. Conceptual knowledge: It includes many sub-knowledge (conceptual awareness, terms awareness, symbols awareness, and laws awareness).
  2. Procedural knowledge: It includes many sub-knowledge (steps knowledge, patters knowledge, solutions knowledge, and structures knowledge).
  3. Contextual knowledge: It includes (sensation awareness, realizing reasons, defining criteria, and solving problems).

Component 2:

Knowledge self-control this component includes 3 regulatory types:
1. Knowledge Management (defining strategies - setting plans - building steps - realization of relations).
2. Knowledge regulations (pattern amendment - substitution a strategy - improving the context - verifying a solution).
3. Knowledge control: it includes (re-planning - amendment of outcome - defining errors - making treatment - thinking control).

Explanatory theories and viewpoints for metacognition strategies.

1- Piaget Theory (1969):

- Based on Piaget views, the mature child can direct knowledge, as he doesn't know the thinking processes that may arise.
- The planned thinking directed to achieve cognitive tasks, are implied in (Piaget) concept of the formal processes in which the high
- Based on the aforementioned we can say that although the metacognition component have different classifications, it consists of two main dimensions, each dimension is divided into sub-dimensions.
- The first dimension: is knowledge about knowledge, which contains understanding and includes (the declarative knowledge - the procedural knowledge - and the conditional knowledge).
- The second dimension: knowledge management and the learner's ability to manage his learning, and it includes:
  o Planning: choosing goals accurately, to achieve one's goals.
  o Monitoring: find out the extent of progress made to achieve one's goals.
  o Evaluation: how far one has achieved his goals (Rokia Abdulaema & Alaa Abdulhussein, 2016, 70).

2- Flavell Theory (1976):

– Explaining the metacognition process role in solving problems, the meta-memory process is considered a part of metacognition process, and it controls the functions of the memory, and its relevant processes, like the mind's ability to store and recover information.

– John Flavell said that there are two basic components (metacognition - and metacognitive experiences).
  o First: Metacognition Knowledge: it consists of (personality knowledge - task knowledge - strategy knowledge).
  o Second: Metacognitive Experiences:

– These experiences may be short-term r long term experiences, simple or it is usually gained in situations which require much caution and conscious thinking) more over metacognition includes the effective monitoring and the subsequent control and co-ordination of cognitive processes to achieve the cognitive goals (Flavell, 1979, 17).

3- Paris Viewpoint (Paris - 1982):

– (Paris et. al., 1982) supposes that metacognition included two processes:
  o First: knowledge and self-control, it included 3 factors (obligation - trends - attention).
  o Second: knowledge and control of process.

– This skill includes the necessary knowledge in metacognition, and performance control, knowledge is divided into 3 types (expressive - procedural - conditional). (Jacobs & Paris, 1982, 12).

– Metacognition thinking skills and learning process:

– Metacognition contributes to learning through many different ways; specially via helping the learners to use their resources to pay attention effectively and treat information deeply and monitor their performance more accurately.

– It refers to one's awareness of the text during the performance of a certain task. (Schraw, 2000, 235)

– Metacognition skills acquisition plays an effective role in the educational process, through lessening the difficulties, which learners may face during their study which motivate them to learn.

(Hamdy El Farmawy & Walid Radwan, 2004, 33) indicated that promoting the student distinction and creativity is associated with developing his metacognition.

– When the learner know what does he learn? and why he is learning? then, learning is meaningful.

- Metacognition allows learners to monitor their progress as well as it provide them with means to evaluate the impact of the efforts, and allow them to predict their ability to remember their subjects later and direct them to the means to control the subjects and facilitate learning and remembering. (Camahalan, 2006)
- It gives them the opportunities to control their mental works and shoulder responsibility, to achieve these works, which requires that the student should learn how to control these decisions to achieve academic success. (Fawzy Alsherbini & Efat Eltanawi, 2006, 27)
- Metacognition skills acquisition, helps learners to control behaviour and self-awareness via monitoring themselves during learning processes, and creating opportunities to choose between learning strategies which ensure the full understanding, and reuse them in other tasks. (Al Hilwani, 2000, 41)
- Consequently, Metacognition skills may be considered as controlling processes whose job is planning, monitoring and controlling one's performance to solve a problem as they are executive skills, whose job is directing the ?? and managing the different thinking skills, and describing the mental activities levels which maintain one's awareness of himself and goals while thinking in solving a problem and one's ability to remember by thinking loudly or by self-talking to monitor and review the activities around the problem. (Roqia Al-ebidi & Alaa El-shabib, 2016, 85)
- Researchers unanimously agreed on three basic types for metacognition thinking which includes a number of sub-skills. (Abo Gado, Mohamed, 2007, 79)

1. Planning: is a way of organizing the subject elements in logical way, and it is the starting point of any work and it includes a definite goal from the person himself of another, and he has a plan to achieve it.
2. Monitoring & Controlling: It refers to how learning happens, and the ability to understand the rules, and it refers to the internal mental process to control and monitor during execution.
3. Evaluation: It means the learners ability to review what they have learned and judge how far they achieved their goals, and it included many questions which one ask himself.

Metacognition Skills Training:

- Metacognition skills are subsequent mental skills, used to control the cognitive activities and learning these skills is very important in learning field, as it gives on the ability to succeed in learning, and it make him more confident in his abilities, and it gives him the

opportunity for a studied use, to enhance his performance, and helps him to transfer tasks to other experiences.

− Metacognition thinking is ?? and it has direct goals, ?? the learner is trained on it in a plan to solve a problem or to think in a certain subject.

− Training on practising thinking processes aims at making the learner practise these processes skilfully, and this skill develops by repetition, so that it becomes a mental habit and it becomes a part of the learner's cognitive and personal components, provided that the learner learns it and trains on practising it accurately, which makes the learner feels comfortable and self-confident. (Katamy, 2001, 62)

− Here are some steps, the teacher should follow to promote the students, metacognitive skills.

1. Allowing the students to monitor their learning and thinking.
2. Providing students with proposals and predictions about the information they read.
3. Showing the students, how to transfer knowledge, trends, skills and others.
4. Defining the skill precisely, on starting the educational activity.
5. Students evaluates themselves and their colleagues, via monitoring the student and the levels of his knowledge.
6. Dividing the work of the skills according to the students capacity.
7. Training the students how to think and observe. (Alia, 2009, 119)

The teacher and student role in developing metacognition skills.

− First: the teacher's role:

− The teacher should carry on the following steps to develop metacognitive skills:

1. To train his students on learning independently.
2. Let his students feel their knowledge and help them to show this knowledge.
3. Train his student on meditation, and show them to sources of learning, and the required educational materials to learn.

− Second: the learner's role.

− The learners should carry on the following steps to promote his precognitive skills.

1. Define, understand his learning goals, explain and describe his personal goals, to participate in class.
2. Defines his previous learning experiences and expresses the desired learning activities.
3. Participates in activities which help achieve goals and define the obstacles for achieving them.

4. Defines new strategies, and develops them to achieve learning goals.
5. Defines the points of weakness and strength, and know the learning condition, and report new needs and goals.

Practical Framework:

In light of the aforementioned, the researcher developed a teaching model based on the precognitive strategies to enhance the performance of fine education dept. students-fine arts faculty, Wasit university, in fine arts practices, and this model is designed based on the theoretical framework of the present study.

First: the teaching model:

The researcher presented this teaching model and its points (metacognitive basic thinking skills, goals, associated activities, response indicators) on a panel of experts and those specialised in fine education field to verify the accuracy and validity of the teaching model points and relevant items.

Hence, based on the survey, the researcher concluded that:

1. Theoretically, the teaching model is suitable to deal with the metacognitive thinking skills to enhance the students performance in fine arts practices.
2. The panel made some amendments on the drafting of goals and their relation with associated activities, and the students expected response indicators.
3. The researcher made some amendments on the model based on the experts opinions, so that the teaching model in its final shape, as indicated in appendix 1.

The researcher used the mean, standard deviation, median, least and highest value, range, skewness, Kurtosis & Leven test for coherence and "T" test for differences statistical significance, and improvement rate.

Statistical treatment for research sample results in anterior and posterior performances:

Schedule (1) statistical description of research sample and the sample equivalence in metacognitive skills.

Serial	Variable	Measuring unit	Mean	Median	Standard deviation	Least value	Highest value	Range	Skewness	Kurtosis
1		Degree	10,43	10,00	0,18	10.00	13.00	3.00	1.79	2.40
2		Degree	10,84	10,00	0.88	10.00	13.00	3.00	1.79	2.06
3		Degree	10.78	10.00	1.43	10.00	15.00	5.00	1.77	1.74

- Schedule (1) indicates the mean, median, standard deviation, least and highest value, range, skewness and Kurtosis of metacognitive skills.
- The schedule showed that the skewness co-efficient for all skills ranged from (1.76 to 1.79) and the Kurtosis co-efficient between (1.74 to 2.40).
- Skewness and Kurtosis lie between (3±) which indicates the sample equivalence in metacognitive skills.

Schedule (2) statistical differences significance between (males - females) in the pre-measurement of the metacognitive skills variable.

Serial	Variable	Measuring unit	Males		Females		Variation Coherence		Differences	
			Mean	Standard deviation	Mean	Standard deviation	F	Sig	"T" test	Sig
1	Planning skill	Degree	1.35	0.67	10.50	0.89	1.41	0.29	0.60 -	0.55
2	Monitoring skill	Degree	10.45	0.89	10.55	0.89	0.02	0.88	0.18 -	0.86
3	Evaluation skill	Degree	10.15	1.48	10.80	1.51	0.00	0.99	0.11 -	0.92
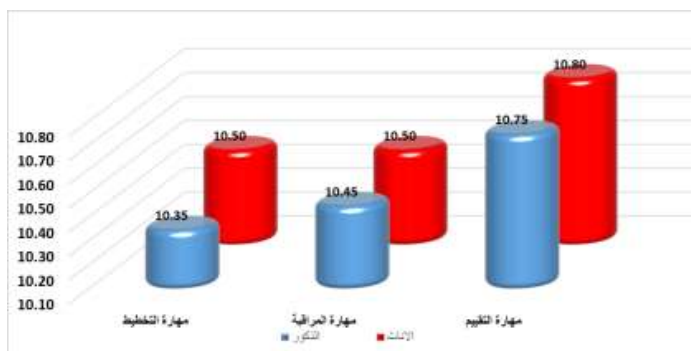
- Figure (1) the post measurement gauge average for two research groups (males - females) in Metacognitive skills.
- Schedule (2) and Figure (1) show the mean, standard deviation for the males group and female group, as well as, the results of Levin test "f" for the two groups coherence and test "T" for the differences significance between the two groups, and the significance level (sig) for the Metacognitive skills.
- The schedule indicates that the "f" value ranged from (0.00 to 1.14) with a significance level between (0.24 to 0.99) for all research
- The schedule also indicate that "T" value ranged from (0.11 to 0.60) with a significance (sig) between (0.55 to 0.92) which is higher than (0.05) which indicates to the absence of difference between the two research groups (males - females) in the metacognitive skills.

Schedule (3) the differences significance between the means of the pre and post measurements and the improvement rate of males metacognitive skills.

Serial	Variable	Measuring unit	Pre-measurements		Post-measurement		Differences		T	Sig	Improvement rate
			Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation			
1	Planning skill	Degree	10.35	0.67	44.15	3.53	33.82	3.66	41.24-	0.00	???
2	Monitoring skill	Degree	10.45	0.89	42.55	3.65	32.10	3.67	39.12-	0.00	301.182
3	Evaluation skill	Degree	10.15	1.48	41.55	3.73	30.90	4.09	93.19-	0.00	281.442

Figure 2 means of the two pre and post measurements for males group in metacognition skills.
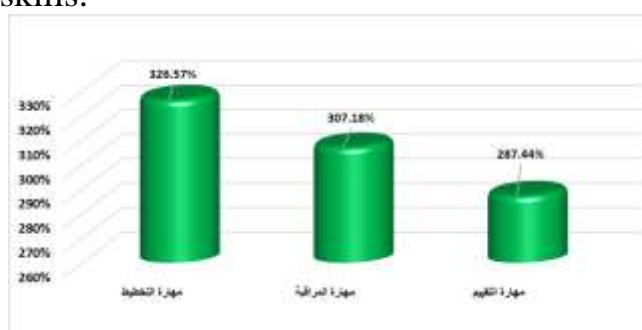

Figure (3): Improvement of male group metacognition skills.

- Schedule (3) and Figure (3) indicate the mean and standard deviation for both pre and post measurements and the statistic differences for the male group in metacognition skills.
- The schedule and figure indicate that "T" value ranged from (33.79 - 41.24) with a significance (sig.) of (0.00) for all research skills, it is less than (0.05) which indicated a statistical significance differences at a significance level (0.05) between the pre and post measurements in metacognition skills for the benefit of the best mean, which is the post measurement.

Schedule (4): The differences significance level between the pre and post measurements means and the improvement rate of females group metacognition skills.

Se ria l	Vari able	Meas uring unit	Pre- measure ment		Post measure ment		Differenc es		"T "	"Si g."	Impro vemen t rate
			M ea n	Stan dard devi atio n	M ea n	Stan dard devi atio n	Me an	Stan dard devi atio n			
1	Plann ing skill	Degr ee	10 .5 0	0.89	44 .9 0	3.04	34. 40-	3.01 -	50. 15-	0.0 0	327.62 %
2	Moni	Degr	10	0.89	43	2.94	33.	3.03	48.	0.0	315.71

	torin g skill	ee	.5 0		.6 5		15-		91-	0	%
3	Evalu ation skill	Degr ee	10 .8 0	1.51	42 .9 5	2.72	32. 15-	2.87	50. 09-	0.0 0	297.69 %

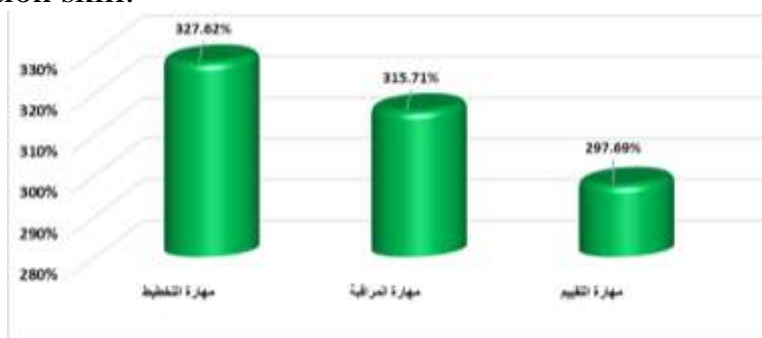Figure (4): The pre and post measurement mean of the female group in metacognition skill.

Figure (5): Improvement rate of female group in metacognition skill.

- Schedule (4) and Figure (4) the mean and standard deviation of the pre and post measurements and the statistical differences for the metacognition skill of female group.
- The schedule and figure indicate that "T" value ranged from (48.51 to 50.15) with a significance level (Sig.) of (0.00) for all research skills, which is less than (0.05) which show that all metacognition skills are for the benefit of the better mean which is the post measurement here.
- The schedule and Figure (5) also indicate that the improvement rate of the post measurement against the pre measurement for female group metacognition skills ranged from (297.69 to 329.62).
- Schedule (5): The statistical differences significance between males and females in the post measurement of metacognition skills. ($N_1 = N_2 = 20$)

-

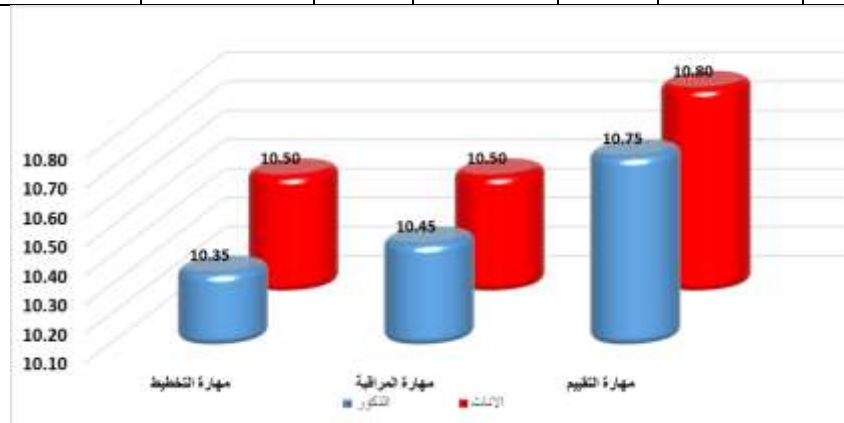| Serial	Variable	Measuring unit	Males		Females		Differences significance	
			Mean	Standard deviation	Mean	Standard deviation	"T"	"Sig."
1	Planning skill	Degree	44.15	3.53	44.90	3.04	0.72 -	0.48
2	Monitoring skill	Degree	42.55	3.65	43.65	2.94	1.05 -	0.30
3	Evaluation skill	Degree	41.65	3.13	42.95	2.12	1.26 -	0.22

Figure (6): The post measurement mean for the research groups (males & females) in metacognition skills.

- Schedule (5) and Figure (6) indicate the mean and standard deviation for the males group and females group, as well as, the results of Levin test for the two groups Coherence and "T" test for the statistical differences significance between the two groups, and the significance level (Sig.) for the metacognition skills.
- The schedule also indicates that "T" value ranged from (0.72 to 1.26) with a significance level which ranged from (0.22 to 0.48) which is higher than (0.05) and which refer to the absence of differences between the two research groups in the post measurement of metacognition skills.

D- Recommendations:

1- Conducting several studies about strategies designing, educational, and training programs to employ metacognition skills in Art Education field.
2- Designing and Planning educational programs and teaching situations in Art Education, whose goals are based on metacognition thinking skills.

Research Appendixes
Appendix No. 1
The reaching model based on the main metacognition thinking skills in its final stage

Metacognition main thinking skills	Goals	Skill associated activities	Expected student response indicators
- Planning skill:	1- Student gather information for one artist targeting the symbolic nature which he expresses as a goal for the tasks he is doing. 2- Students discuss their analyses and explanation for the information gathered, and which targeted their art activities. 3- Students compare their explanations and analysis for the gathered to know how the others were rash in giving explanations not related to the nature of work which the artist wanted to express. 4- Students offer	1- The teacher directs his students to gather information about artists. 2- The teacher directs his students to discuss the gathered information analysis and explanations, as the information about the artist biography and his main works. 3- The teacher urges his students to compare their analysis and explanations to know how far these explanations are related to their art work, as these explanations may be related to life experiences of students or their views regarding society and surrounding environment. 4- The teacher asks his students to develop new ideas	1- Writing down an illustrative report about the artist he will analyse. 2- Re-writing the report with new explanations according to another perspective associated with the art work analysis. 3- Not to be rash in giving art judgement. 4- Students offer new ideas and unfamiliar methods in using the materials.

	new ideas about their works of art, in addition to, new mechanisms in using the various materials.	and mechanisms in their use new materials benefiting from the previous information and others.	

Monitoring Skill:
Goals:
1- Students write their remarks during planning stages.
2- Students maintain the sequence of steps to reach the achievement of the goal.
3- Students write their ideas in the implementation process to overcome difficulties in this stage.
4- The students associate the acquired information with the desired goals so as to achieve them.
5- Students focus on the top goals to produce aesthetic and creative works.

Skill Associated Activities:
1- The teacher directs his students to write their remarks during monitoring skill whether to teach art or practice it.
2- The teacher directs his students to maintain the sequence of steps while thinking to build a work of art till they achieve the goal.
3- The teacher directs his students to write their ideas and information to overcome the obstacles they face.
4- The teacher asks his students to write and discuss the acquired information and ideas and associate them with the targeted goals.
5- The teacher directs his students to focus on achieving top goals which ensure the production of high creative art works and not to be rash in taking decisions.

Expected Students Response Indicators:
1- Students write their aesthetic views for art works during planning stage.
2- Students maintain the sequence of steps to achieve their goals.
3- Students record their ideas and opinions about the techniques of presenting their art works, observing the controls of producing these works.
4- Writing down an acquired information and ideas to achieve targeted goals.
5- The students production of highly creative art works.

Evaluation Skill:
Goals:
1- Students naturally evaluate the reached stage during implementation.
2- Students evaluate how far the techniques and methods used to achieve their goals were appropriate, through the production of their works of art.
3- Students judge the accuracy of the results they reached, through their evaluation of works of art, with the possibility of comparing their productions with others.
4- Students verify the accuracy of the results and ideas they reached and exchange them with other students.

Skill Associated Activities:
1- The teacher directs his students to mutually evaluate their works to reach the best results to achieve goals.
2- The teacher directs his students to evaluate the techniques used to achieve goals such as evaluating their techniques.

in describing and analyse a work of art, and whether this evaluation was objective or self-evaluation, and what made them associate the elements of work with self experiences and if this matter is objective or it merely personal views.

3- The teacher directs his students to mutually evaluate works of art with others, by directing each student to evaluate the stages his fellow passed during the production of an art work.
4- The teacher directs his students to mutually evaluate the ideas and experiences with their colleagues, to help them devise new tracks and lead them to innovation and creativity in practising art.

Expected Student Response indicators:
1- The student takes part in evaluating his work and colleagues works.
2- Students evaluate the used techniques and methods while producing their art works.
3- Students record a mini-report for the ideas about what they want to keep or abandon.
4- Students exchange their evaluations of ideas and experiences.

Appendix (2)
Brika Criterion (2007): To find the extent of progress
in students performance of art practices

Main Skill	Serial	Clauses
• **Planning**	1.	At the start of the school year I set a plan to follow.
	2.	On studying any subject, I thing about its objective.
	3.	On starting research for any subject, I define the works and activities I'll do.
	4.	I read general and simplified books, as a prelude to studying difficult and simplified subjects.
	5.	I read the subject, we will study before the teacher explains it.
	6.	After finishing a research, I make a list about the achieved works and remaining works.
	7.	While preparing the lesson, I expect the questions the teacher may ask, and I prepare the right answers.
	8.	I use dictionaries and references to understand the ambiguous points in the lesson.
	9.	I think the summaries the teacher gives are, so sufficient, and there's no need to resort to other references.
	10.	On reading the exam's questions, I make an illustration to help me solve it.
• **Monitoring**	1.	I choose the appropriate way of work, on studying any subject.
	2.	I face difficulty in defining the important ideas and points in what I read.
	3.	I define my mistakes, so that I can avoid them later.
	4.	I think loudly while studying any subject to increase my attention.
	5.	In case I didn't understand a question or an exercise, I don't waste time and I see the answer directly from the book.
	6.	I ask myself many questions while studying any subject to make sure that I understand the studied subjects.
	7.	When a colleague argue with me on a certain idea,

Main Skill	Serial	Clauses
		I care for checking it, in different references.
	8.	I try to know the teacher's attitude towards my way of researching, to correct it, if it is wrong.
	9.	I feel that researching in this branch, helped me to correct a lot of information and misconceptions.
	10.	I discuss every new idea I study with my colleagues, to make sure that I understand it well.
• **Evaluation**	1.	I wonder; can I solve the problem in another way.
	2.	I wonder; has the solution I reached, achieved the goal of the problem.
	3.	After solving a question or an exercise, I verify the correctness of my answer.
	4.	While studying, I test myself to ensure that I understand well, the studied information.
	5.	I compare my answers and my excellent colleagues answers to locate my mistakes and weaknesses.
	6.	While solving an exercise or a problem, I ask myself about the required answer.
	7.	After finishing the exams, I re-answer them perfectly, to correct my mistakes.

References

1- Abo Gado, Saleh Mohamed Ali, Mohamed Bakr Nofl: Thinking Learning "theory & application". El-Maysara publishing, distribution, and printing House, Amman, Jordan, 2007.

2- Hamdi El-Faramawi, Walid Radwan: Metacognition. Anglo-Egyptian Bookshop, Cairo, 2009.

3- Rokia El-Ebedi, Alaa El-Shabib: Metacognition Thinking "theoretical vision and applied situations". Osama publishing and distribution House, Amman, Jordan, 2006.

4- Talaat Mansour: Development of the Mental Language "metacognitive thinking development strategies". Anglo Egyptian Bookshop.

5- El-Atom, Adnan Youssef, Abdul Naser Diab El-Garah, and Mwafak Shara: Thinking Skills Development "theoretical models and scientific applications". El-Maysara House, Amman, Jordan, 2009.

6- Attia, Mohsen Ali: Metacognitive Strategies in Understanding What is Read. El-Manaheg House for publication and distribution, Amman, 2009.

7- Afana, El-Ismail; El-Khazendar, Nala: The Metacognitive Strategy Impact in Teaching Mathematics on the Development of the Systematic Thinking on Gaza Grade-8 Students. The 8th Scientific

Conference "the absent dimensions in the Arab world science syllabi. Egyptian society for education, Vol. 1, 28 July 2004, Faculty of Education Aden University, Ismailia.

8- Fawzi El-Sherbini, Efat El-Tanawi: Metacognitive Strategies Between the Theory and Application. Egyptian Bookshop for publishing and distribution, El-Mansoura, 2006.

9- El-Katami, Naifa: Effective Teaching Skills. Dar El-Fikr, Amman, 2004.