

The Productive Habits of Mind Among the Students of The Kindergarten Department

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ABSTRACT

The current research aims to identify the productive habits of mind among the students of the kindergarten department according to the variable of the school stage and social status, and the research sample consisted of 400 female students, 116 students from the first stage, 115 from the second stage, 60 from the third stage, and 109 from the fourth stage, for the academic year 2021/2020, and it was completed. Preparing a scale of productive mental habits among the students of the kindergarten department consisted of 16 positions and distributed in each field 4 paragraphs.

The study concluded that the students of the kindergarten department have productive mental habits, as the results came with an arithmetic average higher than the hypothetical average of the scale, and that the difference in the degrees of habits The productive mentality according to the variable of the study stage in favor of the first stage at the significance level at (0.05) was statistically significant, while there was no difference in the degrees of the mental habits produced according to the social status variable at the significance level (0.05).

Keywords: productive habits of mind, kindergarten students

Chapter One

General Framework for Research

Research Problem:

Mental habits are an academic philosophy that focuses on teaching students' thinking processes in a direct way, and the idea simply lies in not filling the students' minds with facts and information, expecting that they will be able to discover the meanings of that information, and they will apply it in their daily lives. Mental Habits is to help use thinking processes to enable current information and to ensure students' ability to know and discover meanings, (Al-Otaibi, 2013: 205).

The traditional systems in education focus on specific products with the correct answer only , while the productive habits of mind allow the students the flexibility to answer when they are unable to know it (Nawfal, 20 08: 66).

Cares education traditional in quantity questions Which maybe requester the answer about her , But when teaching Habits the mind producer ,We care about how he behaves when he is unable to answer

questions, because the mind's habits use them when he faces questions and problems for which he does not have a ready solution, and then attention is focused on developing the student's abilities to produce knowledge, as well as developing his abilities for critical thinking, inquiry and flexibility, (Shawahin; 2014: 1).

Costa points out that neglecting the use of productive habits of mind causes shortcomings in the production of the educational process. Mental habits are not the possession of information, but rather the knowledge of how to work on it and use it as well. It is a pattern of intelligent behaviors that leads the learner to produce knowledge. (Pumice, 2017: 35).

This study came to learn about the productive habits of mind among the students of the Kindergarten Department Where the problem of the current study can be identified in an attempt to answer the following question: What is the level of the productive habits of mind among the students of the kindergarten department.

The Importance of Research:

Habits of the mind were the focus of attention and focus of cognitive psychologists, as this appeared through studies and research conducted by a number of educational researchers to know the productive habits of mind of students that can show their shortcomings in the learning process, and then it is the habits of mind that should focus It should make the students think more Relevance and productivity. (Al-Rabighi, 2015:67).

Recent research seeks to Focusing on, developing, and training thinking through programs designed for this purpose. Psychologists have begun to look at different types of thinking as capable of growth and learning .Therefore, they must be included in the curricula and syllabuses of the different learning classes, especially with regard to higher forms of thinking, Creative Thinking, critical thinking and logical thinking. (Al-Atoom: 36, 2004).

Educators recommend the necessity of developing and teaching different thinking skills for all segments of society and for all ages, especially for school and university students. Thinking skills take students to higher levels, so that the student can possess a mind that is searching, exploring, analyzing and criticizing. So, Increasing the interest in thinking and developing its skills among learners increases their motivation to discover and learn and produces learners who are constantly learning, and who possess self-learning and self-motivation tools to acquire and search for knowledge.

Therefore, the need for active and effective productive habits of mind appeared, such as the need to develop educational goals that reflect the belief that this ability is an experience of a repertoire of skills that the student stores, as productive habits of mind provide opportunities for students to be creative by expressing ideas and asking questions , and issues related to aspects of their lives Hence , the attention is not focused on the number of correct answers that the student knows when teaching is done through productive habits of mind, but in the way the student behaves when he does not know the solution, from observing the student's ability to produce knowledge more than his ability to retrieve and remember it. Developing the habits of mind among students to have the ability to organize and arrange mental processes and help them succeed academically and in life. Hajjat, (2009: 4-3).

Productive mental habits are among the important variables related to performance, therefore, many studies at the beginning of the twenty-first century emphasized the importance and strength of mental habits, discussing them with students, thinking about them, evaluating them , and providing the necessary reinforcement for students in order to encourage them to adhere to them, until they become part of themselves and their structures mental. (Al-Rabighi, 2015: 58).

that working on the basis of productive habits of mind makes the learner effective, as Lauren Resnick (1987) points out that working with these habits makes thinking high-level, and that Arthur Costa for many years has been and still points to the importance of these intelligent behavioral patterns and

confirms that habits of mind should To be the focus of learning. (Jaber Abdel Hamid and others, 2000: 32).

The importance of the research can be summarized:

Research talks about an important segment of society, namely the students. They are the pillars of the future and have a major role in the progress and development of society.

Paying attention to the different forms of thinking as being capable of growth and learning is used to include them within the curricula and decisions of the educational classes.

Society's need for effective habits of mind that enable the development of skills among students and through which support the educational system and advance the educational reality.

Helping female students possess a pattern of intellectual behavior patterns, which is usually the productive mind, supporting it, and then translating it into productive actions that support the community.

Search Objective:

The current research aims to identify the productive mind habits of the kindergarten students according to the variable of the academic stage and social status.

Search Limits:

- 1-Human limits: Kindergarten students.
- 2-Spatial boundaries: University of Baghdad / College of Education for Girls / Kindergarten Department, Al-Mustansiriya University / College of Basic Education / Kindergarten Department
- 3-Time limits: (2021-2020).
- 4-Scientific limits: it includes: a measure of productive habits of mind.

Definition of the terms

Habits of Mind: They were defined by:

1-Marzano (2000);
Marzano's behaviors used by self-regulating thinkers and critics that enable individuals to control their own behavior and thought processes and help them learn any experience they need in the future. (Marzano and others, 200: 17-18).

2-Ricketts (2004);

“Acting intelligently when one does not know the answer to a question”(Ricketts, 2004:11) .

3-Costa & Kalick (2005);
"The individual's tendency to act in a smart way when facing a problem when the answer is not available in the knowledge structures, the problem may be in the form of a confusing situation, a puzzle, or an ambiguous situation". Costa & Kalick, (2005, 19).

4-Nofal (2008);
A set of skills, attitudes, and values that enable the individual to build preferences for smart performances or behaviors based on stimuli and stimuli, as it leads him to select a mental process or perform a behavior from a set of options available to him to confront a problem or issue or effectively implement a behavior, and persevere on this approach. (Nawfal, 2008: 68);

Theoretical definition of productive habits of mind:

The researcher adopted the definition of Costa and Kalick (2005) because it is appropriate to the requirements of the current research.

Procedural definition of productive habits of mind:

It is the overall score obtained by the respondent on the Habits of Mind scale produced for the purposes of this research.

Students of kinder garden department;

"They are students who graduated from middle school, in its scientific and literary branches, and were accepted into the kindergarten department, one of the departments of the College of Education for Girls, which has its own acceptance from the student's guide to preparing them as conscious teachers who are familiar with the world of childhood ".(Guide to the College of Education for Girls, 2009: 76).

Chapter Two
Theoretical framework and previous studies

The concept of productive mind habits:

Productive habits of mind are a pattern of mental performances that lead to actions that help us produce. When we are faced with divisions, confused by dilemmas, or faced with uncertainty, our best and most effective responses require dependence on certain patterns of mental performance. When we employ these mental performances, the results are stronger and more effective. Better quality and greater importance than if we failed to use these patterns of intellectual behaviour. (Costa and Calek, 2000: 8).

Scholars have divided the definitions of productive habits of mind into several divisions, according to the multiplicity of their points of view and the trends that dealt with it:

The first trend: Counting the productive habits of the mind as a type of intelligent behavior that is translated by the learner into actions ,and it is formed after the learner is exposed to certain types of problems with the availability of solutions to those problems or answers to questions that call for contemplation, research and thinking, which are consistent with the saying of the American educator. (Horace Van) as he sees that the habits of the mind are a (thick rope) and the orientation towards them depends on their importance and the belief that they are within the control of the mind so that the individual can achieve what is related to his goals.

The second trend:-

The mental habit is seen as a combination that contains making choices about the patterns of the mental process that must be used at the time of facing the problem, and a new experience that needs high skills to employ mental operations effectively to implement and maintain them, and this trend is consistent with the definition of (Costa and Calic), who stated that mental habits have capabilities that enable the individual to use the appropriate type of mental operations to solve a new problem or experience, and the learner's evaluation of the effectiveness of this step of mental operations or his ability to develop and move towards independent classifications.

The third trend: He finds that mental habits are taking a position by the learner based on a certain principle or values, after the learner is convinced that the attitude is more useful than other patterns, and it requires a degree of skill to apply the behavior effectively and continue it, and thus it becomes clear to us that mental habits It is a method of producing knowledge for learners, not based on a previous pattern of knowledge production, Abdul-Hussein, (2015: 80-81).

Characteristics of productive habits of mind:

1-Valuing; which includes adopting better rational behavior or instead of other less behavior usefulness or productivity . (Suad, 2006: 89).

2-Inclination; is the feeling of an individual's inclination to implement a variety of intellectual behaviour. (Suad, 2006: 89).

3-Sensitivity; awareness of opportunities and their appropriateness to use rational behavior and their application. (Qatami, 2007:157).

4-Capability; It is the possession of basic skills and abilities to achieve success and keep pace with mental behavior. (Al-Otaibi , 2013 : 205)

5-Commitment; the continuous insistence on thinking and contemplation to perform the mental behavior model in a better way. (Casta, Kallick, 2000:17).

6-Policy; they are solutions to the problems facing the individual by integrating intellectual behaviors and transforming them into productive actions and decisions. (Qatami , 2007: 157).

Costa and Kalick's Sixteen Habits of Mind Theory:

Costa and Calek have identified a list of sixteen (16) mental habits necessary for effective thinking, and it must be admitted that this list is not final, but is subject to increase in light of the results of scientific research run by the Habits of Mind Institute, which describes the way people behave when they behave intelligently. Characteristics of what smart people do once they encounter problems that they don't have solutions can be seen right away (Pumice, 2015: 65).

Costa and Calek (2000) define the list of habits of mind into (16 habits

1-Persevering: It means restricting the task entrusted to individuals to its completion and not compromising in the face of difficulties, the ability to analyze the problem and update a system, structure or strategy to solve it, and owning and using a store of alternative strategies to solve problems.

2-Managing impulsivity; It means deliberation and thought before solving the problem faced by individuals. Establish a vision for a business plan, goal, or direction before starting and striving to clarify and understand its directives. Costa and Calek, (2003: 96).

3- Listening with Understanding and Empathy; it means the ability to see the various perspectives of others transparently, and to politely pay attention to the other person by showing understanding and sympathy for the idea, or feeling that this idea is accurately reformulated, or adding other meanings to it, clarifying it, or presenting an example of it.

4-Thinking Flexibility :It means enjoying maximum control, having the energy to change opinions when receiving additional data, being preoccupied with multiple outputs and activities at the same time, and relying on stored repertoire and problem-solving strategies.

5-Thinking about thinking (metacognition) means the individual's awareness of his actions and their impact on others and the environment, and the ability to plan a strategy in order to produce the necessary information) . Costa and Calic, 2003: vol. 1, 26-96).

6-Striving for Accuracy and Precision: it means taking enough time to examine things, review the rules that should be adhered to, and review the models to be followed to ensure that the final products meet those standards perfectly.

7-Questioning and Posing Problem :It is the ability to find and solve problems and ask questions that would fill the gaps between what the individual knows and what he does not know. The tendency to question and ask questions about alternative viewpoints is used.

8-Applying Past Knowledge to New Situation

It means learning from experiences by resorting to the past to extract experiences when facing a new confusing problem, comparing what is being done now with experiences that have passed in the past or referring to those experiences, and retrieving the stock of knowledge and experiences and considering them as data sources to support opinions.

9-Think and Communicating with Clarity and Precision.

It means striving to accurately communicate what individuals want to say, whether in writing or orally, using precise language, specific expressions, proper names and analogies, striving to avoid over-generalization, omissions, and distortions, and striving to support the statements with explanations, comparisons, quantitative measurements, and evidence.

10-Creating, Imagery and Innovating

It means visualizing solutions to problems in a different way ,examining alternative possibilities from several angles, taking risks and expanding the perceived limits, rushing with internal motives rather

than external motives, working to meet the challenge rather than for the sake of reward, being open to criticism and asking for feedback from others.

11-Constant willingness to learn continuously , which means always striving for improvement, growth, learning, modification, self-improvement ,catching problems, situations, tensions, conflicts and circumstances and considering them as valuable opportunities for learning and acknowledgment of lack of knowledge to continue learning.

12-Gathering Data Through All Senses

It means using all the senses to obtain information, and deriving most of the linguistic, cultural, and physical learning from the environment through observing and comprehending things through the senses.

13-Thinking Interdependently; The ability to work and communicate with others in groups, sensitivity to needs, ability to justify ideas and test the viability of solutions on others , and developing a willingness to accept feedback from a critical friend.

14-Responding with wonderment and awe

It means seeking to solve problems to present them to The joy of being able to solve problems, having fun in the face of challenging problems ,seeking dilemmas that others may have , enjoying finding solutions and continuing lifelong learning, feeling enthusiastic and loving towards learning ,inquiry, and mastery.

15-Taking Responsible Risks

It means the presence of a strong impulse that is difficult to control, calling for moving beyond the limits, and the person appears as if he is forced to put himself in situations that he does not know the results of ,and accept confusion, confusion, uncertainty, and high risks of failure as part of the normal process, as it means relying on previous knowledge, and attention results, and knowing that not all risks are worth taking.

16-Finding Humor

It means the ability to perceive situations from a convenient and interesting position, and the inclination to create claims more, and place great value on having a sense of humor, approbation and understanding the jokes of others, and the ability to laugh at themselves and situations. (Costa and Calek, 2003, vol. 1: 28-37).

Studies that dealt with the concept of productive habits of mind:

1- Afaneh Study 2013:

(The effect of using education in the two-sided brain in the study of science to develop some habits of the productive mind among the ninth grade students in Gaza). The aim of the study :to identify the effect of using the two-sided brain education strategy in science education to develop the habits of a productive mind that fit the science subject and to identify the differences In the habits of the productive mind in the experimental and control group, as well as identifying the level of significance of differences in some habits of the productive mind between the experimental and control groups of the female students, the dominant side of the brain, whether it was the right - left - both sides together. The sample: consisted of (80) female students, (40) for the control group and (40) for the experimental group.

Research Tool: Build the Habits of a Productive Mind Test

Statistical means; T-test for two independent samples, Mann and Tine test for differences between two independent groups, and Eta square to measure the size of the effect.

Results:

Statistically significant differences between the mean scores of the experimental group students and their peers in the control group in testing some habits of the productive mind in favor of the experimental.

Group:

Statistically significant differences between the mean scores of the female students who have the dominant sides of the brain in the experimental group and their peers in the control group in testing some habits of productive mind in favor of the experimental group. (Afafa;2013 ; 203).

2- Study of Costa and Calic Costa & kalleck2005

(Habits of the mind are distributed over the two hemispheres of the brain)

The aim of the study: to identify how the habits of mind are distributed on the two hemispheres of the brain of (2380) male and female students.

Tool: - Scale

Statistical methods: Analysis of variance

Results: - The results showed that the habits of mind are distributed on both sides of the brain, the right side includes nine mental habits, the application of past knowledge to new situations - metacognitive thinking - questioning and posing problems - thinking flexibly - visualization and creativity - responding with amazement and awe - thinking Communicate clearly and accurately - Finding humor - Struggling for accuracy, either the left side includes seven mental habits, perseverance - taking risks - controlling impulsiveness - listening with understanding and empathy - reciprocal thinking - always ready for continuous learning - collecting data using the senses.

The results showed that the percentage of mind habits of males on the right side of the brain is higher than that of the left side, while the percentage of females on the left side of the brain was much higher than the percentage of them on the right side of the brain (Al-Mousawi, 2016: 53).

Chapter Three

Research Methodology and Procedures

This chapter presents a presentation of the research procedures in terms of the population, its sample, the method of selecting it, and determining its tools ,application, and statistical methods, as follows:

Research Community:

For the purpose of selecting the research sample, the research community was identified, represented by the students of the Kindergarten Department in the College of Education for Girls - University of Baghdad, the students of the Kindergarten Department in the College of Basic Education, Al-Mustansiriya University, and the students of the Kindergarten Department in the College of Education for Women, the Iraqi University for the morning study for the academic year (2020-2021) . Their number is (1,143) female students (332 (students in the College of Education for Women - University of Baghdad distributed over four stages (562) female students in the College of Basic Education - Al-Mustansiriya University distributed over four stages (248 (female students in the College of Education for Women - Iraqi University distributed over four stages, as shown in Table (1).

Table (1)
Explains the research community

The Study	Total	College	University
Morning	332	Education for Women	Baghdad
Morning	562	Basic Education	Al-Mustansiriyah
Morning	248	Education	Iraqi
All Total	1,143		

Third: Sample of Research

The sample is part of the original research community, chosen by the researcher in different ways, and includes a number of members of the original community, (Obaidat, 1984: 106). The researcher

relied in selecting the research sample the stratified random method, as it chose (400) female students from the University of Baghdad, College of Education for Women by (150), Al-Mustansiriyah University, the College of Basic Education, by (136), and the Iraqi University by the College of Education by (114), and the sample was distributed according to the stage variable as shown in Table (2).

Table (2)
Explain the research sample

Total	Fourth Stage	Third Stage	Second Stage	First Stage	College	University
150	40	25	40	45	Education for Women	Baghdad
136	38	20	42	36	Basic Education	Al-Mustansiriyah
114	31	15	33	35	Education	Iraqi

Search Tool:

To measure the variables included in the current research (the productive habits of mind among the students of the kindergarten department), the researcher found that it is better to prepare the productive habits of mind scale to be suitable for the characteristics of the current research, and it meets the conditions of scientific measurements such as honesty and stability.

Paragraph validity (virtual honesty) face Validity

Honesty: The honest test is that test that is able to measure the phenomenon for which it was created, that is, its ability to measure what it was created for, or the trait to be measured. (Majid, 93 : 2013) , Ebel and Allen & Yen refer to that the best way to verify the apparent validity is to present the items of the scale to experts to judge their validity in measuring the property to be measured .(Allen & Yen, 1979:96)

Ebel, (1978:55) state that this kind of honesty is achieved by presenting the tool to a group of arbitrators and specialists in kindergarten education and psychology, whose number reached (17) arbitrators to issue their judgment on the validity of the paragraphs of the scale referred to in The validity of each paragraph , if it is true or not, in measuring the productive habits of mind for the kindergarten students and suggesting the appropriate modification in the event that it needs modification.

They saw the paragraph as valid in measuring the phenomenon to be measured, and a mark (false) in the field (invalid) if They did not see the paragraph as valid to measure the attribute or The paragraph is valid, but it needs to be reformulated clearly and precisely to be clear and valid, and that the paragraphs should be amended in the proposed amendment field, and after emptying the arbitrators' notes for the paragraphs. It was found that all the paragraphs are valid, but the researcher took the suggestions of the experts as shown in Tables No. (3)

Table (3)

Clarifies the opinions of experts on the validity of the items of the Habits of Mind scale of the kindergarten students.

Ratio	Non-agree	Percentage	Agree	Paragraphs
0	0	%100	17	64-1

Table(4)

Paragraphs of the Productive Habits of Mind Scale that were modified based on the opinions of the arbitrators

After modification	Before modification	Parag.
I get excited about new situations that are	Feel excited if it includes a new	

interesting and unexpected	situation in which the events are interesting and unexpected	41
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Survey study

For the purpose of ensuring the clarity of the scale’s instructions ,paragraphs and alternatives , as well as detecting and avoiding the difficulties that respondents face and calculating the time it takes Answering the scale, the researcher applied the scale to a sample of (30) students who were chosen randomly , from the University of Baghdad, Al-Mustansiriya University and the Iraqi University.

Statistical analysis of the productive habits of mind paragraphs

The objective of the paragraph analysis is to obtain data from which the discriminative power is calculated. The data analysis process is an essential step in building the scale and the aim of this procedure is to preserve measurable vertebrae. Ebel, (1972:392).

Distinguishing the Habits of Mind productive paragraphs:

It is strongly intended to distinguish the paragraph and its ability to distinguish between the examinees from the low- performance category and the high-performance category in their answers to the paragraph (Al-Nabhan, 2004: 188) as psychological measures require calculating the discriminatory strength of its paragraphs for the purpose of keeping the paragraphs with discriminatory strength in the final image and excluding non-paragraphs Distinguished or modified by (CHISELL, 1981:43).

To achieve this, the researcher followed the following procedure:

- 1-The two extreme groups determined the total score for each of the female students’ forms on their response to the Productive Habits of Mind scale.
- 2-Arrange the scores from the top to me the lowest.
- 3-A percentage of (27%) of the upper group was adopted, and they were the ones who got the highest percentage, (27%) of the lower group and they were the ones who got the lowest marks. (Ghubari and Akher , 2010: 394).

In order to find the discriminatory power of the paragraphs of the productive habits of mind scale, the researcher applied the measurement to a sample of (400) female students from the Kindergarten Department , University of Baghdad, College of Education for Girls, Al-Mustansiriya University, College of Basic Education, and the Iraqi University, College of Education for women . The highest scores (the upper group), and the percentage (27%) of the questionnaires that got the lowest A - degrees from the (lowest group), which means the number of members of each group (108).

The T-test was used for two independent equal samples to test the significance of the differences between the average scores of each group. The upper and lower bounds for each paragraph of the scale are found. After extracting the arithmetic mean and standard deviation for both the upper and lower groups, the computed T- value represents the discriminatory power of the paragraph between the two groups. It was found that all the paragraphs are distinct and statistically significant, except for paragraphs (12-32-52-64) Table (5) that shows this .

Table (5)

The discriminatory power of the Habits of Mind scale using the two extreme samples

Sig.	Calculated T	Standard deviation	Arithmetic mean	Group	Parag. No.
Sig.	10.486	0.48	4.83	Higher	1
		1.07	3.65	Lower	
Sig.	10.024	0.63	4.71	Higher	2

		0.97	3.6	Lower	
Sig.	8.043	1.11	4.03	Higher	3
		1.15	2.79	Lower	
Sig.	4.279	1.32	3.94	Higher	4
		1.12	3.23	Lower	
Sig.	9.529	0.95	4.43	Higher	5
		1.22	3.01	lower	
Sig.	10.052	0.52	4.78	Higher	6
		1.28	3.44	Lower	
Sig.	10.588	0.5	4.81	Higher	7
		1.21	3.48	Lower	
Sig.	3.524	0.98	4.26	Higher	8
		1.24	3.72	Lower	
Sig.	10.833	0.52	4.81	Higher	9
		1.06	3.57	Lower	
Sig.	9.321	0.54	4.68	Higher	10
		1.15	3.54	Lower	
Sig.	8.702	0.89	4.45	Higher	11
		1.16	3.23	Lower	
Non-Sig.	0.238	1.59	3.19	Higher	12
		1.26	3.15	Lower	
Sig.	6.028	0.67	4.79	Higher	13
		1.27	3.95	Lower	
Sig.	12.151	0.57	4.75	Higher	14
		1.26	3.14	Lower	
Sig.	7.871	0.86	4.5	Higher	15
		1.02	3.49	Lower	
Sig.	5.741	1.4	3.87	Higher	16
		1.27	2.82	Lower	
Sig.	11.009	0.83	4.63	Higher	17
		1.17	3.11	Lower	
Sig.	11.863	0.36	4.9	Higher	18
		1.09	3.59	Lower	
Sig.	10.496	0.54	4.81	Higher	19
		1.23	3.45	Lower	
Sig.	6.162	1.44	3.7	Higher	20
		1.29	2.56	Lower	
Sig.	14.401	0.49	4.79	Higher	21
		1.13	3.07	Lower	

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Sig.	13.029	0.26	4.93	Higher	22
		1.11	3.5	Lower	
Sig.	13.009	0.71	4.62	Higher	23
		1.1	2.98	Lower	
Sig.	5.369	1.48	3.81	Higher	24
		1.3	2.8	Lower	
Sig.	12.992	0.54	4.8	Higher	25
		1.14	3.21	Lower	
Sig.	10.482	0.66	4.74	Higher	26
		1.11	3.44	Lower	
Sig.	12.589	0.72	4.6	Higher	27
		1.02	3.08	Lower	
Sig.	6.449	1.17	4.14	Higher	28
		1.19	3.1	Lower	
Sig.	12.047	0.73	4.61	Higher	29
		1.04	3.14	Lower	
Sig.	9.551	0.88	4.5	Higher	30
		1.11	3.19	Lower	
Sig.	9.370	0.85	4.53	Higher	31
		1.27	3.15	Lower	
Non-Sig.	-0.772	1.62	3.08	Higher	32
		1.16	3.23	Lower	
Sig.	11.507	0.65	4.73	Higher	33
		1.09	3.32	Lower	
Sig.	9.508	0.94	4.44	Higher	34
		1.17	3.07	Lower	
Sig.	13.603	0.76	4.58	Higher	35
		1.1	2.83	Lower	
Sig.	4.428	1.09	4.16	Higher	36
		1.16	3.48	Lower	
Sig.	15.786	0.61	4.71	higher	37
		1.02	2.91	Lower	
Sig.	12.591	0.64	4.71	Higher	38
		1.23	3.03	Lower	
Sig.	13.721	0.59	4.73	Higher	39
		1.21	2.95	Lower	
Sig.	5.409	1.33	3.89	Higher	40
		1.21	2.95	Lower	
Sig.	12.395	0.51	4.8	Higher	41

		1.07	3.38	Lower	
Sig.	6.972	1.34	3.95	Higher	42
		1.16	2.77	Lower	
Sig.	12.188	0.32	4.91	Higher	43
		1.15	3.51	Lower	
Sig.	2.980	1.75	3.19	Higher	44
		1.28	2.56	Lower	
Sig.	4.682	1.49	3.3	Higher	45
		1.29	2.41	Lower	
Sig.	10.640	0.76	4.56	Higher	46
		1.13	3.17	Lower	
Sig.	7.101	1.29	3.91	Higher	47
		1.24	2.69	Lower	
Sig.	4.256	1.37	3.56	Higher	48
		1.22	2.81	Lower	
Sig.	11.960	0.79	4.59	Higher	49
		1.25	2.9	Lower	
Sig.	10.853	0.41	4.85	Higher	50
		1.14	3.58	Lower	
Sig.	14.320	0.54	4.81	Higher	51
		1.15	3.06	Lower	
Non-Sig.	-0.402	1.7	3.33	Higher	52
		1.33	3.42	Lower	
Sig.	12.121	0.72	4.69	Higher	53
		1.15	3.1	Lower	
Sig.	10.372	0.75	4.57	Higher	54
		1.12	3.23	Lower	
Sig.	8.592	0.97	4.32	Higher	55
		1.1	3.11	Lower	
Sig.	3.449	1.68	3.52	Higher	56
		1.25	2.82	Lower	
Sig.	13.610	0.86	4.58	Higher	57
		1.09	2.77	Lower	
Sig.	11.576	0.92	4.36	higher	58
		1.19	2.69	Lower	
Sig.	7.661	1	4.35	Higher	59
		1.24	3.18	Lower	
Sig.	7.775	1.01	4.31	Higher	60
		1.24	3.12	Lower	

Sig.	11.046	0.59	4.78	higher	61
		1.13	3.43	Lower	
Sig.	10.166	0.6	4.81	Higher	62
		1.28	3.44	Lower	
Sig.	9.459	1.09	4.43	Higher	63
		1.35	2.85	Lower	
Non-Sig.	0.216	1.69	3.63	Higher	64

The relationship of the paragraph's score with the total score of the productive habits of mind scale

This method of extracting the internal consistency of the paragraph depends on the correlation between the scores of each paragraph and the total score of the scale (Nunnally, 1978: 262), and it is distinguished from the first method in that it reveals the extent of homogeneity of the scale's items. This is an indication that each of the scale's paragraphs runs in the same path that runs in the same path as the whole scale with all its paragraphs (Allen & Yen, 1979:129) and to calculate the paragraph's correlation with the total score of the productive habits of mind scale, the researcher used the Pearson correlation coefficient. And after obtaining the results and comparing the calculated correlation coefficient with the tabular value of (0.098) at the level of significance (0.05) and the degree of freedom (398). As shown in Table (6)

Table (6)

Statistical analysis of the items of the Habits of Mind scale using the item score relationship method with the total score

Sig.	Cor. Fac.	Sig.	Sig.	Cor. Fac.	Para.	Sig.	Cor. Fac.	Para.	Sig.↓	Cof. Cor.	Parag.
Sig	0.54	49	Sig	0.55	33	Sig	0.55	17	Sig.	0.48	1
Sig	0.53	50	Sig	0.48	34		0.55	18	Sig	0.48	2
Sig	0.64	51	Sig	0.59	35	Sig	0.51	19	Sig	0.41	3
---	Fell in Descr.	52	Sig	0.25	36	Sig	0.38	20	Sig	0.21	4
Sig	0.50	53	Sig	0.65	37	Sig	0.61	21	Sig	0.42	5
Sig	0.49	54	Sig	0.58	38	Sig	0.56	22	Sig	0.51	6
Sig	0.48	55	Sig	0.61	39	Sig	0.56	23	Sig	0.51	7
Sig	0.25	56	Sig	0.3	40	Sig	0.30	24	Sig	0.23	8
Sig	0.59	57	Sig	0.59	41	Sig	0.61	25	Sig	0.54	9
Sig	0.51	58	Sig	0.44	42	Sig	0.53	26	Sig	0.48	10
Sig	0.43	59	Sig	0.54	43	Sig	0.57	27	Sig	0.51	11
Sig	0.41	60	Sig	0.23	44	Sig	0.34	28	---	Fell in Descr.	12
Sig	0.54	61	Sig	0.31	45	Sig	0.54	29	Sig	0.37	13
Sig	0.52	62	Sig	0.57	46	Sig	0.46	30	Sig	0.57	14
Sig	0.46	63	Sig	0.41	47	Sig	0.47	31	Sig	0.43	15
---	Fell in Descr.	64	Sig	0.27	48	---	Fell in Descr.	32	Sig	0.33	16

Relationship of the paragraph's degree to the field to which it belongs:

Since the productive habits of mind scale includes a number of fields that differ among themselves, which necessitated extracting the correlation between the degree of each paragraph and the total degree of the field to which it belongs. Therefore, the total degree of the field and each form of the

research form was calculated according to the Pearson correlation coefficient between degrees. The students were given each paragraph and the total score for the domain in which they are located. It was found that the correlation coefficient is all a statistical function at the level of significance (0.05) if the calculated values of the correlation coefficient are all greater than the tabular correlation coefficient of (0.098) and the degree of freedom (398).

The relationship of the degree of the domain to other domains and to the total score of the scale

Finding the internal correlations between each domain and the other domains of the Habits of Mind scale using the Pearson correlation coefficient, and all correlation coefficients were significant when compared with the tabular value (0.098), at the significance level (0.05) and the degree of freedom (398) as shown in the table (7).

Table (7)
Statistical analysis of the items of the Habits of Mind scale using the domain-to-domain relationship method and the domain in total score

Habits Of the mind	Applying knowledge	Questioning and posing problems	Struggle for accuracy	Thinking metacognitive	Thinking flexibly	Listening	Controlling recklessnes	authentic	field field
0.58	0.23	0.36	0.39	0.4	0.47	0.42	0.53	1	Perseveranc
0.65	0.31	0.42	0.44	0.48	0.4	0.49	1	---	Drag Control
0.64	0.3	0.42	0.43	0.51	0.44	1	---	---	Listening
0.65	0.3	0.5	0.45	0.52	1	---	---	---	Flexible Thinking
0.77	0.41	0.63	0.63	1	---	---	---	---	Thinking metacognitiv
0.73	0.37	0.56	1	---	---	---	---	---	The fight for accuracy
0.75	0.42	1	---	---	---	---	---	---	Questioning and posing problem
0.59	1	---	---	---	---	---	---	---	Knowledge App
Mind Habits	Finding Humor	Take responsibility	Respond with amazement	Reciprocal Thinkin	Data collection	Permane nt Standby	Bringing New	Communica te clearly	field field
0.72	0.37	0.31	0.29	0.21	0.31	0.43	0.31	1	Communica te clearly
0.76	0.34	0.42	0.17	0.37	0.44	0.48	1	---	Bringing New
0.7	0.41	0.21	0.37	0.52	0.45	1	---	---	Permanent Standby
0.56	0.27	0.4	0.47	0.41	1	---	---	---	Data collection
0.71	0.47	0.55	0.56	1	---	---	---	---	Reciprocal Thinking
0.65	0.56	0.51	1	---	---	---	---	---	Respond with amazement
0.72	0.53	1	---	---	---	---	---	---	Take responsibility

									y
0.63	1	---	---	---	---	---	---	---	Finding Humor

Scale stability Stability is defined as the consistency between the results, and the test is considered stable if we obtain the same results from it when reapplying it to the same individuals and under the same circumstances (Ibrahim, 42: 2000).

Alfa Coefficient for Interual Consistency: Thorndike and Higgin indicated that extracting stability according to this method depends on the consistency in the individual's response to each item of the scale, and it depends on the standard deviation of the whole scale and the standard deviation of each item on the scale (Saber and Khafajah, 116: 2002). To extract the stability of the Habits of Mind scale (consistency), the Alpha-Kornbach equation was adopted, as it turned out that the stability coefficient was equal to (0.94) , which indicates that it is good stability.

Final scale:

The size in its final form is from (60 (after deleting the paragraphs (12-32-52-64) that fell in **The** distinction and five alternatives (applies to me a lot, applies to me often, applies to me sometimes, applies to me rarely, does not apply to me) corresponding to the scores (1,2,3,4,5) for the positive items for productive habits of mind and (2,1, (5,4,3) For negative paragraphs, the highest score for the scale is ,(300) the lowest score is (60), and the hypothetical average is (180).

Statistical means :

The researcher used the statistical program (23-SPSS).

1- Test for two independent samples to find out the significance of the differences between the mean scores of each of the upper group and the lower group for each of the two scale items when calculating the discriminatory power.

2-Pearson correlation coefficient was used to extract the following:

- A- The relationship of the paragraph's degree to the total degree
- b- The relationship of the paragraph's degree to the total degree of the field to which it belongs
- c- The relationship of the field to the field and the field to the total degree

3-Alpha-Cronbach's coefficient to extract the stability scale (Producing Habits of Mind).

4-Analysis of binary variance to find the significance of the differences in the habits of mind and self-control according to the variable of the school stage and social status

Chapter Four

View and discuss results

This chapter includes a presentation of the results of the research and its discussion with the results of previous studies and their interpretation according to the theoretical framework and objectives, and a number of recommendations and proposals are presented according to the results of the research.

First goal: to identify the productive habits of mind among the students of the kindergarten department.

The null hypothesis: - There is no statistically significant difference between the arithmetic mean of the kindergarten students on the Productive Habits of Mind scale and the hypothetical mean of the scale at the level of significance (0.05).

To achieve this goal, the arithmetic mean of the scores of the sample members of (400) female students was extracted, and it was found that their average scores on the scale amounted to (217.75) degrees, with a standard deviation of (24.65) degree .The use of the t-test for one sample shows that the difference is statistically significant and in favor of the arithmetic mean, as the calculated t-value was higher than the tabular t-value of (1.96) with a degree of freedom (399) and a level of significance) 0.05 , (thus rejecting the null hypothesis and accepting the hypothesis The alternative that states that there is a statistically significant difference between the arithmetic mean of the

kindergarten students on the scale of productive habits of mind and the hypothetical mean of the scale at the level of significance (0.05) and Table (9) shows this.

Table (9)

T-test for the difference between the sample mean and the hypothetical average of the Habits of Mind scale

Sig. Level	Freedom Degree	Tabulated T Value	Calculated T Value	Hypothetical Mean	Standard Deviation	Arithmetic Mean	Data Size
Sig.	399	1.96	30.63	180	24.65	217.75	400

Table (9) shows that the average scores for the productive habits of mind among the kindergarten students are higher than the hypothetical average, and this indicates that the students have positive habits of mind, which means that the nature of the efficient students is committed to the task entrusted to them until it is completed, and they collect evidence for the success of the strategies that They sell it carefully and think before coming to any work and establish a productive vision or a plan of action, and by the nature of smart people, they plan and think to become more effective and influential on themselves and others. The product and a means of learning, (Al-Qatami and another, 2009: 190) and these results are in agreement with previous studies (Afaneh 2013, Costa and Kalick 2005 study).

The third objective: to identify the differences in the productive habits of mind According to the variables of the educational stage and social status.

The null hypothesis: There is no statistically significant difference between the two arithmetic averages of the kindergarten students on the scale of productive habits of mind according to the variables of the school stage and social status at the level of significance (0.05).

To achieve this goal, the researcher used a two -way analysis of variance Way Anova Two, to identify the significance of the differences in habits the mind according to my variable stage and status social and table (10-11) explains that.

Table (10)

Arithmetic averages and standard deviations of the Habits of Mind scale according to the variables of school stage and social status

Standard Deviation	Arithmetic Mean	No.	School stage and marital status
23.99	227	15	first married
23.25	226.43	101	first unmarried
23.24	226.50	116	first whole
20.36	219.14	21	Second married
24.26	215.20	94	Second unmarried
23.56	215.92	115	Second whole
18.82	209.40	10	Third married
25.24	212.28	50	Third unmarried
24.17	211.80	60	Third whole
28.21	214.02	42	Fourth married
23.58	213.42	67	Fourth unmarried
25.34	213.65	109	Fourth whole

Table(11)

The results of the two-way analysis of variance to reveal the significance of differences in productive habits of mind according to the variables of school stage and social status

Sig	F- value	Squares M.S mean	Freedom degree D.F	Square total s.of.s	Source of Desc. s.of.v
					I

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0.05 Sig. at	7.545	4404.716	3	13214.149	stage
Non-sig. at 0.05	0.119	69.286	1	69.286	Social status
Non-sig. at 0.05	0.160	93.394	3	280.183	Stage \ social status *
----	----	583.801	392	228850.179	false
----	----	----	400	19208881	totally

In order to find out the significance of the differences in the productive habits of mind according to the variables of the school stage and social status, the researcher used Scheffe test for the following dimensional comparisons:

1-There is no significant difference in the productive habits of mind of the kindergarten students according to the variable of the academic stage.

2-There is no significant difference in the productive habits of mind for the kindergarten students according to the variable of social status.

3-There is no significant interaction in the productive habits of mind for the kindergarten students between the variables of the academic stage and social status.

After the researcher used Scheffe for dimensional comparisons, it was found that:

1-There is a statistically significant difference in the productive habits of mind for the kindergarten students according to the stage variable in favor of the first stage ,as the calculated t value reached (7.545), which is A higher than the tabular maximal value of (2.60) at the significance level (0.05) and the degree of freedom (3 -392), (and therefore the null hypothesis is rejected and the alternative is accepted.

2-There is no statistically significant difference in the productive habits of mind for the kindergarten students according to the variable of social status.

3-There is no statistically significant interaction in the productive habits of mind for the kindergarten students between the variables of the school stage and social status. Table (12) illustrates this

Table (12)

Evaluate the differences between the medians and the critical Scheffe values to find out the differences in Habits of the mind according to the variable of the school stage

Sig.	Scheffe Value	Dif. Between the two means	Arithm. mean	No.	Compar.
Sig. at the first 0.05	8.88	10.58	226.50 215.92	116 115	First\ second
Sig. at the first 0.05	10.73	14.70	226.50 211.80	116 60	First\ third
Sig. at the first 0.05	9	12.85	226.50 213.65	116 109	First \ fourth
Non- sig.	10.75	4.12	215.92 211.80	115 60	Second \ third
Non- sig.	9.02	2.27	215.92 213.65	115 109	Second\ fouth
Non- sig.	10.85	1.85	211.80 213.65	60 109	Third\ fourth

The third objective: to identify the differences in the productive habits of mind According to the variables of stage and social status.

It was found in the two tables (10-11) that among the female students of the kindergarten department there were statistically significant differences according to the academic stage in favor of the first stage. The first stage acquired the productive mental habits from high school, where they were in schools that developed the productive habits of mind and thinking for them, which they acquired these habits to the university, and the results showed that there is no statistically significant difference in the productive habits of mind and social status, and this indicates that married and unmarried students have similar mental habits. As shown in the table, there is no statistically significant interaction between the variables (stage and social status) among kindergarten students.

The most important findings of the researcher:

- 1- Kindergarten students have positive, productive mind habits
- 2- In the productive habits of mind, there are statistically significant differences in the stage variable in favor of the first stage, and there are no statistically significant differences according to the social status variable.

Based on the researcher's findings, she recommends the following:

- 1 Inviting the responsible authorities in the Ministry of Higher Education to develop plans that include holding educational courses for educational cadres in order to develop the productive habits of mind for kindergarten students.
- 2 The necessity of taking care of a segment of university students through the media, civil society institutions, religious and political institutions, in order to maintain and develop the levels of their productive habits of mind
- 2 Giving an opportunity for kindergarten teachers to participate in the rehabilitation of a generation that possesses mental abilities that can advance the country's scientific reality
- 3 Setting a comparison criterion to show the ability of qualified female students and directing support to them to be an incentive for the rest of the female students

Suggestions:

- Conducting a similar study for kindergarten principals.
- Productive habits of mind and its relationship to high-ranking thinking among female students of the Kindergarten Department.
- Building a training program to develop the productive habits of mind for the kindergarten child.

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