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Revealing the Extent of Kindergarten Teachers' practicing of some Activities to Develop Sensory and Creative Thinking among Kindergarten Children in Amman according to Some Variables

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Abstract

The study aimed at identifying the extent to which kindergarten teachers practiced some of the activities of developing sensory and creative thinking on the kindergarten children in the city of Amman, and knowing the level of practice of teachers in kindergartens of the activities of the development of sensory and creative thinking which was prepared by the researchers according to "the number of years of experience, and the type of qualification and academic degree. For this purpose, the researchers designed a questionnaire consisted of (47) items in which two types of activities were chosen, which develop thinking patterns: sensory (24) activities and creative (23) activities and applied them to (78) kindergarten teachers in the regions of Amman City.

The researchers relied on the SPSS statistical program and the Kruskal-Walls test was used to determine the significance of the differences in the sample responses. The study has reached the following conclusions: The practice of kindergarten teachers for some activities of the development of motor sensory thinking among the kindergarten children in the city of Amman was high, the arithmetic mean reached (2.53) for some sensory thinking activities, which was slightly more than the creativity that reached (2.39). The results also showed that there are no differences in the implementation of activities related to the development of sensory thinking and creative thinking in research by kindergarten teachers due to the number of years of experience variable. The views of kindergarten teachers are similar in the application of activities related to the development of sensory thinking and creative thinking, whatever their scientific qualifications.

Keywords: activities for the development of sensory thinking, activities for the development of creative thinking, kindergartens.

Introduction

The attention to childhood and what is provided to it from the special health services and educational services become one of the important criteria for measuring the progress of societies and their awareness of all groups of their citizens, especially the children of the future (Jad, 2007).

There is no doubt that the orientation towards early childhood in the focus of this care is a logical direction as one of the most important stages of growth in the formation of human personality and influence the subsequent stages of growth. The World Declaration on Education for All stressed that the basic requirements for quality and equal opportunities and effectiveness in the field of Education is determined in the early childhood years, which makes early childhood attention and development necessary to achieve the goals of basic education (Arab Resource Workshop, 2000).

The development of the capacities and skills of children in kindergarten, especially the mental ones, is directly related to the activities offered to him at home and in the kindergarten in particular, which is organized by the teacher. "It is wrong to think that the teaching of thinking is possible" only in later periods of the life of the organism, but the basis of thinking is to be established early in the lives of children since they know their (Anas) that prompts them to open their minds and awareness of themselves and those around them (Mutaweh, 2010)

And it is almost popular among researchers who have been exposed in their writings to the subject of thinking. That thinking and creating exciting opportunities are very important and should be a primary goal of educational institutions. McClure said. "Thinking for human" is like breathing, as it is a necessary process of life, is more like a natural activity indispensable to a person's daily life (Sulaiti, 2006).

Children have sensitive moments in their mental development stages and they need a mediator in particular. This mediator is an educator, and they generally need to help and support adults such as parents, teachers and peers, as well as appropriate stimuli to develop their inner abilities and potentials (Jamal, 2008).The teacher must play an active role in organizing and preparing various activities that work to develop different aspects of growth, especially activities that are accused of developing thinking.

The study discusses the use of some activities in kindergartens by teachers, which develop sensory thinking and creative thinking as the two most important types from the developmental characteristics of this stage.

Theoretical Framework

Thinking as a concept is a mental activity whether it is solving the problem or making a decision or trying to understand a subject that involves thinking. Thinking is a conscious process that the individual consciously perceives but does not exclude the subconscious, that is, the process of thinking is an individual process but not

in isolation from the surrounding environment, i.e., the process of thinking is influenced by the social context and the cultural context in which it takes place. (Murtada and Jamal, 2009) while sensory thinking: it treats the individual with what he can only see or hear, that sensory stimuli must be associated with the process of thinking, Creative thinking is about finding solutions or finding authentic results that were not known .

The environment in which a child is born influences his thinking. As we know, there are environments rich in stimuli from the activities, tools and mechanisms of learning, and we should not exaggerate if we consider that the method of socialization has a direct relationship that affects the development of these thinking skills, and here we move on to the important idea of developing these skills. the activities for children and that those skills take into account a larger role in their development, and the intended activity here is among the operations and actions planned in advance by the teacher and by the child through various kinds of sports experiences and linguistic, scientific and technical so as to achieve the desired educational goals . It is recognized that the function of education in its various institutions is concerned with the development of thinking, as it is not only necessary for this stage, but also a cultural and human necessity, because acquiring these skills helps them to face obstacles subsequently, many countries have adopted various programs and activities to enrich that aspect in children. When talking about activities to develop thinking skills must be taken into account that the mental side is directly related to the emotional side, knowing that any learning comes through the senses, so I must first provide a psychological center of health in terms of freedom and meditation flexibly to stimulate the abilities and preparations of children whatever it was, in addition to providing a sense of security and, of course, positive reinforcement of the situation and the nature of each child, and the creation of the appropriate physical medium and educational strategies and based on the following points:

- Develop a child's ability to think properly through classifying activities, matching, completing an incomplete story, suggesting suitable titles for some stories, of course after telling it, posing a problem or a difficult situation that needs solutions or suggestions to get out of them, arranging things, time recognition, the use of monotonous relations, the distinction of groups below the maximum, the highest of the lower and open from the closed and the inside from the outside.
- The development of the ability to imagine: Through stories that talk about the manifestations and natural beings speak human language or incidents outside the reality, drawing and coloring and the composition of the various materials either by the identification of a subject or imaginary left created by the imagination of children altogether, playing with geometric shapes and make different formations, and plays to re-imitate them, propose new games.
- Understanding and recognizing the child for himself: through activities that allow him to recognize the characteristics of his distinction from his name, age, weight, voice, feelings, and express what he likes and what he hates.
- To recognize the importance of hearing and its importance by distinguishing audible sounds in its surroundings as well as other senses of sight, smell, taste and touch.
- Developing Problem Solving: Through Games, are problem questions needing extraordinary solutions or suggestions: Assume that the cow has two wings. Think about how we can milk them. The game can be played after the novel part of the stories open end to suggest an appropriate end to it. Also it can be used for other uses of some tools, purposes (dishes, spoons for non-food ... wool for non-textile .....)

All of the above activities can be used through several methods. There is also the possibility of using one method more than one activity. Of course, we always stay within the sensory methods and take into consideration the child's developmental characteristics such as realism and biology. The research will monitor the verification of some of the sensory and creative activities used by the kindergarten teachers.

Research problem

The educational institutions involved in this stage play a fundamental and important role in their development and the teacher has the largest role in this process as directly responsible for directing the children's activities and creating the appropriate stimulating environment for them. During their workshops for kindergarten teachers, the two researchers noticed their differing use of sensory and creative activities for children from experience to other, especially non-linguistic experiences, so the research problem focused on the following question:

What is the extent to which kindergarten teachers are using sensory and creative activities according to the variables of experience and scientific qualification?

Significance of Research

It is recognized that talking about the importance of early childhood, including the experiences that contribute to the formation of the personality pattern of the child, especially the mental side and the use of thinking patterns consistent development characteristics of this stage, and the role of the teacher is significant

and influential in the kindergarten stage in the preparation and planning of development thinking skills' activities. The importance of research comes from:
- The effect of teachers' experience through the number of years of service in this field (low, modest, good) will be demonstrated by their practice of activities related to the development of selected skills.
- The results of the research may result in restricting those who work in the kindergartens to activating activities or drawing attention to specific procedures in this regard.

Research goals
The research aims to:
- Designing a questionnaire for kindergarten teachers in activities that develop the sensory and creative thinking among the kindergarten children in order to determine the extent of practicing these activities in accordance with the two types of thinking adopted in the research.
- To detect the existence of a statistically significant relation between the degree of qualification of the kindergarten teacher and her use for some of the selected activities in research that contribute to the development of sensory and creative thinking patterns.
To detect the existence of a statistically significant relationship between the number of years of experience of the kindergarten teacher and her use for some of the selected activities in the research that contribute to the development of sensory and creative thinking patterns.
Research steps and procedures:

- Building the tool
- Discussing some female teachers in the activities they use during the application and noting the quality of activities used in some kindergartens.
- Return to research literature: in order to design the test items and to verify its validity and reliability.
- The questionnaire was constructed by first selecting the types of thinking that characterize the characteristics of the stage. These activities can be used on a daily basis. They can also be considered as procedures for any type of expertise provided to the child based on the opinions of some of the kindergarten teachers.
- it was taken into account that : don't need special environment, or high cost, that kindergarten and teacher can't meet or achieve, such as leaving the kindergarten or relying on expensive tools and things.
- it has been adopted so that it doesn't conflict with the nature of the curricula that are officially approved for children.

Virtual validity:
A number of activities were proposed for each type of sensory and creative thinking, verifying the validity of the tool through the sincerity of the arbitrators, which was presented in its initial form to (6) experienced and competent arbitrators from the faculty of Al Isra University and asked them to express their views on the items of the tool in terms of language safety, clarity of paragraphs and the relevance of each paragraph to the field to which it belongs, as well as any proposal or amendment to those paragraphs and in light of the remarks of the arbitrators, the wording of some activities was modified and the proposal of different activities to be more clear.
Internal consistency:
To verify the validity of the internal consistency of the questionnaire, the Pearson correlation coefficient was used to measure the relationship between each paragraph and the total degree of the axis to which it belonged. The results were as follows:

Table (1) correlation coefficients for the overall degree of the axis to which it belongs

Axis	Item	Correlation coefficient	Item	Correlation coefficient
Thinking sensory motor activities	1	**4670	13	**5670
	2	**5700	14	**5820
	3	**4280	15	**3660
	4	**4420	16	**5280
	5	**5160	17	**4950
	6	**5170	18	**6170
	7	**4390	19	**4290
	8	**3820	20	**4920
	9	**4530	21	**3610
	10	**4840	22	**3940
	11	**4920	23	**5360

Axis	Item	Correlation coefficient	Item	Correlation coefficient
	12	**6450	24	**5290
Creative Thinking Activities	1	**5990	13	**6360
	2	**6360	14	**5560
	3	**6900	15	**6240
	4	**6110	16	**64109
	5	**7410	17	**6280
	6	**7030	18	**5540
	7	**5820	19	**6410
	8	**5550	20	**6310
	9	**5610	21	**5290
	10	**7050	22	**6200
	11	**5760	23	**5970
	12	**6310		

** Significant at (0.01)

It is clear from Table (1) that all correlation coefficients between each paragraph and its associated axis were positive and statistically significant at (0.01). This indicates that all paragraphs of the questionnaire were true and measure the objective for which they were set.

Reliability

In order to verify the stability of the questionnaire, the Cronbach alpha coefficient was found for the resolution axes. The results were as follows:

Table (2): The values of the Cronbach alpha parameters for the resolution axes

Axis	Cronbach alpha coefficient
Thinking sensory motor activities	0.861
Creative Thinking Activities	0.927

The above table (2) shows the values of the Cronbach alpha coefficients for the high values, which means that the questionnaire has a high degree of stability.

Research Methodology:

The research followed descriptive analysis as the approach that studies variables as they exist in their natural situations to determine the relationships that can occur between these changes (Mansour et al., 2008, p. 53).

Research through the questionnaire depends on the extent of the practicing of the Riyadh teachers for some activities to develop sensory and creative thinking and its relation to the degree of scientific qualification, and the number of years of experience.

Study Tools

The research was based on the design of a questionnaire in which some activities develop sensory thinking by (24) activities, and another group for creative thinking (23) activities. For the children of Riyadh, the researcher proposed six skills and each of them has seven activities using the triangular Likert ladder (I use, I sometimes use, I don't use).

The research sample:

The researcher selected a random sample of kindergartens in the city of Amman to apply the questionnaire by the teachers according to what is available and cooperative from kindergartens and regardless of their specialties; they were from civil and governmental kindergartens. The following table describes the sample of the study according to the specialty on the ground:

Table (3): Distribution of sample members by academic specialization

Specialization	Frequency	Percentage %
Child education	49	62.8
French literature	1	1.3
Home Economics	1	1.3
English	11	14.1
Special education	2	2.6
Graphic	1	1.3
diploma	1	1.3
Islamic studies	4	5.1
Kindergarten	1	1.3
Arabic Language	2	2.6
Master of Talent	1	1.3
Class teacher	3	3.8
Agricultural engineering	1	1.3
Total	78	100.0
Percentage of educational competencies		70

Table (4 :)Distribution of sample members by experience

Experience	Frequency	Percentage%
From 1-5	34	43.6
From 6-10	35	44.9
11 and above	9	11.5
Total	78	100.0

Table (5): Distribution of the sample members by scientific qualification

Qualification	Frequency	Percentage %
Diploma	27	34.6
Bachelor	41	52.6
Master	10	12.8
Total	78	100.0

Statistical Methods:

To achieve the objectives of the study, the Statistical Packages for Social Sciences (SPSS) program was used to analyze the data and obtain the results as follows:

- Frequencies and percentages to describe the characteristics of the sample.
- The arithmetical averages and the standard deviations to identify the responses of the sample members on each of the paragraphs of the questionnaire.
- Pearson Correlation coefficient to measure the reliability of internal consistency of the questionnaire.
- Cronbach's alpha coefficient for reliability of the questionnaire.
- Kruskal-Walls test for the significance of differences between more than two independent groups.

Research Limits

Temporal: The first semester of the academic year 2016-2017
Spatial: Kindergarten in Amman City.
Scientific: Sensory thinking and creative thinking and activities that develop them.

Previous Studies

The study of Zakri and Nawar (2016), the activity of play and its relation to the development of innovative thinking among kindergarten children, aimed at finding out whether playing activity contributes to the development of innovative thinking. The results showed that the activity of playing contributes to the development of innovative thinking among kindergartens, and contributed to the development of the cognitive aspect. There are statistical significance differences in the innovative thinking, depending on the level of the economy.

Alimat (1014): The Effect of Educational Qualification and Experience on the Implementation Skills of Kindergarten Teachers among Kindergarten Teachers from their Point of View. The researcher applied a sample of 65 teachers from Mafraq Governorate. The research concluded that the kindergarten teacher's degree of implementation skills in three areas (Methods, techniques, activities). Each side obtained a high rating which was respectively: activities, methods, activities, and found significant differences in the degree of teacher perception of the implementation skills. In the field of methods and means for teaching kindergarten child, Scientific for the benefit of the teachers who hold higher diploma and above and did not show In the field of activities, while differences were found in the degree of the Riyadh teacher's perception of the implementation skills required to teach the kindergarten child in the field of teaching aids and aids as a whole due to the variable years of experience of the experienced teachers 10 years and above, while no significant differences were found in the fields of activities and methods.

The study of Yozohir and Fateh (2014) showed the impact of a sports recreation program on the development of some creative abilities of preschool children. The study aimed at finding the effect of a sports recreation program in developing some of the creative abilities of kindergarten children. The sample consisted of 40 children and 20 children as control samples and 20 children as experimental samples. The results showed that there were statistically significant differences in the effect of recreational activity in developing creative abilities for the experimental group.

In addition, the study of Khader (2011), the impact of a program based on some scientific activities in the development of creative thinking skills of the kindergarten child, a pilot study on a sample of kindergarten children aged 5-6 years in Damascus. The study showed that there are statistically significant differences between the experimental and control group average for the experimental group in the development of creative thinking skills.

Al Harbat (2011) study the impact of a story-based program on the development of creative thinking skills among Riyadh children in the field of environmental and geographic experiences among Riyadh children. The sample consisted of 85 children, a control group of 22 children and three experimental groups, the results of the hypotheses showed that there was a statistically significant difference between the three experimental groups and the control group in the post-achievement test in favor of the experimental groups. The results showed no statistically significant differences between the experimental groups and there were statistically significant differences between the control group and the experimental group's degree on the Torrance scale of creative thinking.

Al-Khafaji (2011) study examined the educational activities in the role of governmental nurseries and their relation to some variables, the aim of the study was to measure educational activities in the role of government nurseries and to measure difficulties and obstacles in implementing educational activities. According to the variables (number of years of experience, scientific qualification, age), the sample consisted of (18 managers, 36 assistants, 46 nanny). The results showed no statistically significant differences in the exercise of sensory activities due to the variable of scientific qualification, and also no statistical significant differences of the variable years of experience.

Aweys (2009) study dealt of the effectiveness of a training program for kindergarten teachers to develop some of the skills of thinking among kindergarten children, the study aimed to determine the effect of the program to give kindergarten teachers methods and techniques necessary for the development of thinking skills, and measuring the acquisition of kindergarten children thinking skills, the sample consisted of (199) children aged 5-6 years and teachers of kindergartens (15), teachers who agreed on training (41) teachers as a control group, the results showed a statistically significant differences in favor of the experimental group in the improved performance of the teachers in the post test, which contributed to the gaining knowledge and methods that reflect thinking skills among children.

Aweys (2003) study "the effectiveness of play in giving preschoolers a range of mathematical skills". The study aimed to test play as a learning-educational method in order to provide kindergartens with a range of mathematical concepts. The sample consisted of (128) children between the ages of 5-6 years. The results showed that there were statistically significant differences in mathematical concepts for the experimental group. There are no statistically significant differences attributed to gender in mathematical concepts showing the importance of the role of play in providing children with many different skills and experiences.

It is clear from the previous studies that they are interested in sensory activity in general and creative in particular, through the development of programs that help to increase and develop the skills of creative thinking and verifying the effectiveness of the study (Zakri and Nawar, 2016), which used the play for that while the study of (Harbat, 2011) used the story and the study of (Khadr, 2011) used the scientific activities, but there is a lack of studies on the extent of knowledge and possession of kindergarten teachers for the skills of the use of sensory and motor activities, which distinguished the study of the extent of the use of Riyadh teachers for sensory and creative activities. The study of (Khafaji 2011) and Al-Alimat (2016) show the absence of statistically significant differences due to the scientific qualification and the number of years of experience among kindergarten teachers and nurseries in the use of activities with children.

Search Hypotheses:

- There were no statistically significant differences in the level of significance of (0.05) in the application of activities related to the development of sensory thinking and creative thinking in the research by the teachers of Riyadh according to the variable number of years of experience.
- There were no statistically significant differences in the level of significance of (0.05) in the application of activities related to the development of sensory and creative thinking in the research by the teachers of Riyadh according to "the variable of scientific qualification.

Discussion of research results:

In order to identify the extent to which Riyadh teachers practiced some of the activities of the development of sensory and creative thinking on the children of Riyadh in Amman, the arithmetical averages and standard deviations of the scores of their responses were calculated on the axis items of each axis. Results were as follows:

Thinking sensory motor activities

Table (6): Shows the arithmetical averages and standard deviations of their responses to the axes of the kinetic reasoning activities

N	Item	Mean	Standard deviation	Degree of practice	Ranking
1	Formation of the characters before they are written using (paste, ml, clay ...)	2.72	0.507	High	1
13	Employing movement to acquire mathematical concepts (above, under, inside, outside)	2.72	0.556	High	2
18	Sensitive texture recognition using sorted papers and other materials	2.71	0.561	High	3
22	Use various sensory objects to acquire color concepts	2.69	0.542	High	4
19	Distinguishing tastes sensibly	2.68	0.570	High	5
17	Distinguishing smells sensibly	2.64	0.624	High	6
11	Gently combine using abacus	2.63	0.667	High	7
20	Employ the components of the external arena for the development of scientific concepts (soil, flowers, trees, etc.)	2.63	0.605	High	8
9	The components of the number are computed using the abacus	2.62	0.649	High	9
10	form Digital symbols' numbers using (paste, ml, clay ...)	2.62	0.608	High	10

8	Installation of Basel geometric shapes	2.56	0.616	High	11
12	Apply tactically using abacus	2.55	0.732	High	12
21	Exploitation of the school landscape (soil, flowers, trees, etc.)	2.55	0.617	High	13
4	Use the sensory structure of words	2.54	0.596	High	14
14	The use of tools in the process of filling and unloading in order to develop the concepts of sizes and weights	2.49	0.659	Moderate	15
15	The installation of stereotypes of animals or a component of the natural environment	2.47	0.639	High	16
3	Use of Sensory Analysis of Words (Cut, Fold, ... etc)	2.44	0.636	High	17
24	The use of various sensory forms for the concept of mathematical profiling	2.42	0.655	High	18
16	Use of sensory sequence to acquire concepts based on phases (plant growth stages ... butterfly ...)	2.40	0.671	High	19
2	Use animated characters of various materials (wood, plastic, etc.)	2.38	0.688	High	20
7	Mitigation of geometric shapes	2.35	0.735	High	21
6	Ease the characters before they are written	2.32	0.674	Moderate	22
23	The use of coins and paper to acquire financial and mathematical concepts	2.32	0.712	Moderate	23
5	Reorder story cards	2.31	0.708	Moderate	24
	Total	2.53	0.311	**High**	

Table (6) shows the arithmetical averages, standard deviations and degrees of practice of kindergarten teachers for some of the activities of the development of sensory thinking on the children of kindergarten in the city of Amman in descending order, where the values of the averages ranged between (2.31 - 2.72) most of them are of high degree of practice. Item number (1) Formation of the characters before they are written using (paste, ml, clay ...) got the highest mean of (2.72). The two researchers attribute this to kindergarten's great interest in teaching children to read and write to prepare for school without paying attention to the development of other goods such as sports experience and Scientific and this is what drew attention to by the study (Aweys, 2003), while paragraphs (6, 23 and 5) obtained intermediate degrees of practice, the lowest of which was paragraph (5) (reordering of the cards of the story), where they obtained the lowest mean and their value (2.31) because they don't value this activity which is the child saw the story and heard it.

The table also shows that the total number of paragraphs achieved an average of (2.53) and a large degree of exercise. This indicates that the practice of kindergarten teachers for some activities of developing sensory reasoning on the children of kindergarten in Amman was largely due to the availability of sensory materials that serve such activities and the different reference approaches have.

The following staging was used to indicate the average responses of sample members to the degree of practice:

Mean	Degree of approval
2.34 and above	High
From 1.67 to less than 2.33	Moderate
Less than 1.67	Low

Creative Thinking Activities

Table (7): Shows the arithmetical averages and standard deviations of their responses to the focus of creative thinking activities

N	Item	Mean	Standard deviation	Degree of practice	Ranking
9	Classification of images in his style.	2.63	0.584	High	1
10	Give words begin with a specific voice.	2.62	0.608	High	2
5	Decorate letters with various materials.	2.54	0.751	High	3
17	Give a justification for certain natural phenomena based on facts and information he has.	2.47	0.597	High	4
21	The use of his body to express the elements of representation and dramatic performance.	2.47	0.618	High	5
22	Initiate proposals to arrange the surrounding physical piles (activity room, games room, arena ...)	2.47	0.659	High	6
7	Installing new words.	2.45	0.696	High	7
16	Formation of paintings from start-up materials (recycling.)	2.45	0.677	High	8
6	Form as many words as possible in the weight of a word.	2.44	0.731	High	9
18	Creating stories about living things.	2.42	0.614	High	10
8	Speech analysis by personal initiative.	2.41	0.692	High	11
14	Create a dance or a motor expression after listening to music.	2.38	0.669	High	12
20	Creating a mathematical style by himself.	2.38	0.629	High	13
3	Re - word synonym.	2.35	0.735	High	14
15	Formation of paintings using various materials.	2.33	0.733	Moderate	15
19	The use of sound ratings during performances or presentation	2.33	0.750	Moderate	16

12	Create a story of himself by changing a character or event.	2.32	0.730	Moderate	17
11	Give words ending with a specific voice.	2.29	0.758	Moderate	18
1	Give a new title to the story.	2.28	0.754	Moderate	19
4	Draw the story after telling it	2.26	0.729	Moderate	20
23	Free spindle formation.	2.26	0.746	Moderate	21
2	Complete the anthem with a fragment or an additional word from him.	2.22	0.696	Moderate	22
13	Complete the end of an open story ending.	2.21	0.727	Moderate	23
	Total	2.39	0.429	**High**	

Table (7) shows means and standard deviations and degrees of practice of kindergarten teachers for some of the development activities of creative thinking on kindergarten children in the city of Amman, in descending order, the means ranging between the values (2.21 - 2.63), where paragraph (9) (image classification by his style) got the highest average arithmetic value (2.63) and the degree of great practice, the researchers attributing this to the presence of taxonomic abundance activities in the curriculum and activities of kindergarten, and because the child loves and tends and even hasten to practice these types of activities, while paragraph (13) (complete the end of the story open-end) got the lowest average value (2.21) and a moderate degree of practice , because most of the teachers don't trust creative abilities of children.

The table also shows that the total number of paragraphs has a mean average of (2.39) and a large degree of practice. This indicates that the practice of kindergarten teachers for some of the activities of developing creative thinking on the children of kindergarten in the city of Amman was very much and this supports the tendency of many studies to build creativity development programs for children, and these studies proved the positive interaction of children with them such as the study of (Harbat, 2011) and the study of (Khader, 2011) and study of (Yozuhir and Fatih, 2014) and the study of (Zaki and Nawar, 2016).

Results related to the first hypothesis: (There are no statistically significant differences at the level of significance (0.05) in the application of activities related to the development of sensory thinking and creative thinking in the search by the kindergarten teachers according to the variable of experience).

To test this hypothesis, the Kruskal-Walls test was used to determine the significance of differences in the application of activities related to the development of sensory thinking and creative thinking in research by kindergarten teachers according to the variable number of years of experience. The results were as follows:

Table (8): the results of the Kruskal-Walls test indicate differences in the application of activities related to the development of sensory thinking and creative thinking in the search by the kindergarten teachers according to the variable number of years of experience

Axis	Years of experience	N	Mean of ranks	Kay Square	Df	Sig
Sensory thinking	From 1-5	34	39.78	1.160	2	0.560
	From 6-10	35	37.43			
	11 and above	9	46.50			
Creative thinking	From 1-5	34	35.63	1.767	2	0.413
	From 6-10	35	42.64			
	11 and above	9	41.89			

Table (8) shows that the values of the significance levels were greater than (0.05) in both axes. This means accepting the hypothesis and indicating that there are no differences in the application of activities related to the development of sensory thinking and creative thinking in the research by kindergarten teachers. This indicates the similarity of the views of kindergarten teachers in the implementation of activities related to the development of sensory thinking and creative thinking, whatever their years of experience. This agreed with the Khafaji study (2011) and the Alimat study (2014) on such activities.

Results related to the second hypothesis: (There are no statistically significant differences at the significance level (0.05) in the application of activities related to the development of sensory thinking and creative thinking in the research by the kindergarten teachers according to the variable of scientific qualification).

To test this hypothesis, the Kruskal-Walls test was used to determine the significance of differences in the application of activities related to the development of sensory thinking and creative thinking in research by kindergarten teachers according to the scientific qualification variable. The results were as follows:

Table (9): Results of the Kruskal-Walls test to indicate the differences in the application of activities related to the development of sensory thinking and creative thinking in the search by kindergarten teachers according to the variable of scientific qualification

Axis	Scientific qualification	N	Mean of rank	Kay square	Df	Sig
Sensory thinking	Diploma	27	40.02	3.249	2	0.197
	Bachelor	41	36.41			
	Master	10	50.75			
Creative thinking	Diploma	27	40.83	1.301	2	0.522
	Bachelor	41	37.11			
	Master	10	45.70			

Table (9) shows that the values of the significance levels were greater than (0.05) in both axes. This means accepting the hypothesis and indicating that there are no differences in the application of activities related to the development of sensory thinking and creative thinking in the research by kindergarten teachers.

This indicates the similarity of the views of kindergarten teachers in the implementation of activities related to the development of sensory thinking and creative thinking, whatever their scientific qualifications. This is what agreed with Khafaji (2011) and Alimat (2014). The sample available in the research was about 70% of which were educational specialties, ie they have a knowledge and practical experience about developmental characteristics consistent with the kindergarten stage.

Recommendations

- Conduct further research on the impact of the experience and qualifications of scientific teachers on the various skills and educational competencies of the teacher
- To explore the extent to which practicing the activities to develop this way of thinking among kindergarten children (sensory and creative) with other ways such as observation.
- Design and implement programs that support and develop such thinking patterns in children.

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