Journal Of the Iraqia University (73-1) June (2025)

ISSN(Print): 1813-4521 OnLine ISSN:2663-7502
Journal Of the Iraqia University
available online at
https://iasj.rdd.edu.iq/journals/journal/view/247

The effect of Kindergarten Programs on the Intellectual Development of Children from Teachers' Point of View

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أثر برامج رياض الأطفال على النمو العقلي للأطفال من وجهة نظر المعلمات

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الملخص

يهدف هذا البحث إلى معرفة الفرق بين الممارسات والبرامج التربوية في رياض الأطفال الحكومية وغير الحكومية/الأهلية وتحديد أثرها على النمو العقلي لأطفال رياض الأطفال من وجهة نظر المعلمات. ولتحقيق هذه الأهداف استخدم الباحثان المنهج الوصفي. وتتكون عينة الدراسة من (١٠٠) معلمة ومعلم من (٥) رياض أطفال حكومية و(٥) رياض أطفال أهلية تابعة لمديرية تربية روزئاوا في السليمانية، وقد أخذنا (١٠) معلمات من كل روضة كعينة لدراستنا.وقد تم استخدام استمارة استقصائية مكونة من (١٨) فقرة لحل البيانات الإحصائية وجمع المعلومات، وكانت أغلب الفقرات موجبة، واستبانة تحتوي على ثلاثة خيارات للإجابة منها (نعم، أحياناً، لا) والأرقام المخصصة للفقرات هي (١، ٢، ٣)، ثم قام الباحثان باستخراج القياسات السيكومترية للمقياس، بدءاً باستخراج القيم المركزية للحساب والفروق، على شكل مقياس ليكرت، وقيمة (ت) للمثال الواحد والمثالين، ومعادلة جيتمان الإحصائية لتوزيع النصفين، ومعادلة كوبر الإحصائية باستخدام اختبار (ت). وكانت هذه أهم نتائج هذه الدراسة.ولاحظ الباحثان أن الممارسات والبرامج المستخدمة في رياض الأطفال على مستوى مرتفع وقد يكون ذلك راجعاً إلى وجود الكثير من التخطيط والاهتمام بتعليم الأطفال في رياض الأطفال عينة البحث، وهناك فرق بين برامج رياض الأطفال الحكومية والخاصة في التعليم وأثرها على النمو العقلي للأطفال، حيث تتفوق فيها رياض الأطفال الخاصة. وأخيراً قام الباحثان بتحديد بعض النقاط وتقديم بعض التوصيات.

الكلمات المفتاحية: الآثار الإيجابية للبرامج، النمو العقلي للأطفال، رياض الأطفال.

Abstract

The aim of this study is to understand the difference between the educational practices and programs of the governmental and non-governmntal/private kindergardens and to determine their effect on the intellectual development of kindergarten children from the viewpoint of teachers. In order to achieve these goals, the researchers used descriptive research method. The sample of the study consists of (100) teachers from (5) governmental and (5) private kindergardens belonging to Rozhawa Education Directorate of Sulaimani, we took (10) teachers from each kindergarten as the sample of our study.A survey form consisting of (18) items used to solve the statistical data and collected information, in which almost all of the items are positive, and a questionnaire with three options for answering, including (yes. Sometimes and no) and the numbers assigned to the items are (1, 2 and 3) ، then the researchers extracted the psychometric measurements of the scale, starting to extract the central values of the calculus and the differences, in the form of Likert scale, the (T) value for one and two examples, Jetman's statistical equation for distribution of halves and Cooper's statistical equation using t-test. These were the most important results of this study .The researchers noted that the practices and programs used in kindergartens are at a high level which may be due to the fact that there are a lot of planning and concerns about teaching children in the kindergartens of the research sample, and there is a difference between governmental and private kindergarten education programs and their influence on the intellectual development of children, in which the private kindegartens are the winner. Finally, the researchers assigned some points and made some recommendations.Key word: Positive effects of programs ،children's mental development ، kindergarten.

The problem of the Study:

Comparing governmental and private kindergartens is one of the most important problems that many parents today debate about. Their question is which type of kindergarten is the best to help their children develop fast or which one of them follow the health guidelines and care about the conditions of their children and provide a suitable environment for practicing and benefiting from their programs and promote their childrens' abilities, skills and talents. These are parts of serious problems that have affected parents whether to register their children in a governmental or a private kindergarten.In Kurdistan Region, generally after 2003 many private or non-governmental kindergartens and non-governmental educational sectors have been opened. Now the percentage of private kindergartens are increasing significantly due to the high amount of demands of parents to register their children in those kindergartens since they are witnessing their childrens' learning abilities and outcome. Also because most of the non-governmental kindergartens have their own goals, plans and educational programs that are completely different from the goals and programs of the governmental kindergartens (Qadir ،2020): 278)There is no doubt that most families cannot provide a suitable environment for their children. Even rich and capable families in this era of civilization and technology cannot satisfy all the physiological, social and psychological needs of their children and break the thirst of their desires. But if the kindergarten is programmed on a scientific plan and cared about children needs, it can serve both, them and their world as well. (Qarachattani ،2016:210)The researchers in this study talk about the below problems faced by Kurdish families:

1. The educational environment and programs in the kindergartens (governmental and private) is the main source of concern for parents , because they don't know how to find the kindergarten that is the most appropriate to the level of intellectual development and biological age of their children.
2. Understanding the great differences in the practice and programs of education between the governmental kindergartens and the governmental ones and this one is the main reason for most of the families to register their children in non-governmental (private) kindergartens.
3. Copying the rich and wealthy families by middle-class families inwhich sometimes impose a lot of burden on them and is one of the problems faced by Kurdish society.

The Importance of the Study:

Conducting any research will have its own importance at the individual and community level, and the importance of this research is that, this is an effort to understand the importance of practices and programs of education and their impact on children's intellectual development as children play an important role in building society so there is a great need for them to be directed properly because the future of society depends on them. And the research is in a form of a descriptive analysis study and the researchers have used it to compare some of the governmental and non-governmental kindergartens in terms of the curriculum they follow as well as highlighting the weak and strong aspects of the kindergarten programs and their impact on children's intellectual development which helps the Ministry of Education to compose a better education program. Since the research focuses on the importance of kindergartens, this can help teachers understand the importance of kindergartens

and their effect on the characters of children.This research, like any other research, is of interest in two aspects, the theoretical part, in which provides a set of information about the subject of research that has been requested in the past and this can also be a reason for introducing the governmental and non-governmental kindergartens in terms of their educational programs, another reason that makes it important is the benefit it can give to the Ministry of Education, the Kurdish society and also every single family to become more familiar with the environment of the kindergartens and the condition of their children.The aim of the study:

1. To know the impact of educational practices and programs on the intellectual development of kindergarten children from the eyes of teachers.
2. Knowing the difference that exists in the procedures and programs of private and the governmental kindergartens of the study area:

A. Location boundaries: Some of the kindergartens of Sulaymaniyah governorate ،both private and governmental which include (5) governmental and (5) private kindergartens.

2. Time boundary: 2023-2024
3. Human boundaries: (100) teachers in a total of (5) of the governmental and (5) private kindergartens.

Terms and concepts:

-Program: Topics that are intended to provide students with a range of learning opportunities (Hama Baban and others ،2016:64)

-Program: Is a set of subjects, areas of learning and studying that are provided in the teaching system. Programs include a planned and targeted learning experience through which learners acquire and develop knowledge, skills and attitudes (Kindergarten Program Document (2018: 7).

- Researchers' definition: Includes all educational programs that are practiced in educational centers in order to develop the intellectual and physical aspects of students.

-Mental development: Psychologist Jean Piaget believes that cognitive development in children is the product of everything that changes their actions into a picture of thought called thinking. (Kalhor, 2010:64)

-Intellectual development: By the meaning of intellectual abilities (vision, vigilance, feeling, knowledge and remembrance). These mental abilities more or less exist in children but they require development and the main source of intellectual abilities is the environment and conditions in which the child lives in (Awaz, 2012:75).

-Researchers' definition: A type of development that in a normal child it begins to develop at the very beginning of childhood if his/her psychological environment is suitable, so it is very necessary for teachers and kindergarten staff to develop these intellectual skills through (games, stories, pictures, paintings, dancing , singing, tourism and so on) to encourage children to learn about the environment and other phenomena of society and life.

-Childhood: A period of age in which the life cycle of a human being begins at birth and ends with adulthood. (Al-Rimawi, 2009:46)

-Child: The creature that have moral and can distinguish between good and bad. Child is born naturally good and can learn in a better way if he is given the opportunity to develop freely and according to the nature of his needs. (Awaz, 2012: 15)

- The researchers' definition: child is the creation of God whom he has endowed with intellect from the beginning of his birth and can invent. Life and humanity through his inventions can be destroyed.

- Kindergarten: is a social educational institution for the early stage, allowing complete freedom to practice activities and discover one's own desires as well as help to gain new professionals at the age of 2 to 6 years (Nabhat, 2009: 10).

- The researchers' definition: Kindergarten is an educational institution that children between the ages of 4 and 6 go to, with the goal of achieving general and full-fledged development in all aspects of kindergarten through the practice of activities. The experiences are of two stages, the primary stage and the kindergarten.

2-1 Theories about programs and their relationship with the intellectual development:

- Jean Piaget and his followers' Theory

This theory focuses on the aspect of child's knowledge and development. According to this theory the pre-school program should be comprehensive and include all activities of the child that finds the pre-procedure level to the material level. This theory cares about the developmental changes that occur in humans in a short period of time. It also believes that the kindegartens are the most suitable places for children to do their activities and learn to exercise, so that they have a natural response to the surrounding agitators.

- Theories of education and intelligence:

In this theory the characteristics of the child's age is an important sources for planning the program. According to this theory, children are divided into a number of appropriate ages and then according to their age, they are given the appropriate information and subjects based on the skills and abilities of the children.

Thinkers of this theory only care about cultural and environmental changes that affect humans for a long period of time and for them the program must be adapted to the age and changes that are linked to it. (Hamad ،2005: 128).

2.1.1 Kindergarten programs and their impact on the intellectual development of children:

The studying curriculum focuses on many issues such as basic communication skills, knowledge of the national language, mathematics, general science and social issues focusing on political, economic and communist beliefs. The programs care about preparing a directed career so that citizens can learn the necessary skills to be able to play a role in changing the social and economic game. At the same time they focus on studying, doing research and completing the studying process to achieve general political goals, for example studying art, etiquette, dance, painting and etc. (Qadir, 2020: 252).

The factors influencing the pre-school program to determine the type and goals of the school program should be considered as follows:

A. The childrens' hobbies. B.Childrens' talents and abilities. c . Childrens' needs and demands.

2.1.2 Types of educational tools and their effect on childrens' mental development:

❖ Syllabus (curriculum): In ancient times educators had a narrow view of practice, so they defined it as a set of information and disciplines that the school or kindergarten gives to the student in order to develop and use this knowledge and prepare them for life. The information was in the context of mathematics, Kurdish language, science ...etc. they were given to the students and the subjects were divided into stages and years of studying, which means that syllabus consisted of a set of subjects of studying which were developed by experts within the framework of a book and students studied them in either kindergartens or schools (Siwaili, 2017:22).

The curriculum that an individual receives from inside or outside an educational institution has a specific goal that leads to a change in the behavior of knowledge ،expertise ،and consciousness ،and brings the child to a higher level. (Aziz, 2012: 59).

❖ Whiteboard: One of the tools that played a major role in the education process in the past and even now exists in almost every teaching hall, and it has its importance in kindergarten because it is less used in the kindergartens compared to schools and other stages of education. The teacher sometimes uses it to write a letter or a number and the children use it to draw, despite the fact that children use their sense of hearing and vision, and when they stand on the whiteboard they use their other sensors when trying to repeat a letter, number, picture...etc.

❖ Use of photographs: The use of photographs has a particular importance in the process of education for analyzing and explaining information. It is one of the most important tools in kindergarten. The child uses the sense of vision because it consists of symbols, colors…etc. Images can be used instead of direct learning, as it is both easier to use and also less expensive. (Hamadamin, 2016: 143).

❖ Game: Using educational games is considered one of the most important teaching tools, it contemplates the mental state of the child and the teacher plays an important role through performing activities and educational games in an organized and planned way. Playing is one of the activities done in childhood and defined as a purposeful activity because it can be done to develop their mental, physical and emotional abilities also not to be deprived of their childhood enjoyment. (Hamadamin, 2016: 144).

2. 1. 5 Types of games that are offered to children with the programs:

❖ Theatrical games: This game is the imitation of behavior and lifestyle, which relies primarily on childrens' imaginations. This game is one of the most important learning games and it is also mentioned as a creative game.

❖ Organizating game: In this type of game the child puts things next to each other without a prior plan and when finally creates something that he knows makes him happy. This game develops the creative abilities of the children.

❖ Artistic games: As an artistic expression activity derived from consciousness and aesthetic feelings. Children express their feelings in their drawings, which vary according to gender, age, economic and social aspects of families and also their intelligence levels.

❖ Educational games: This is an effective way to educate children. Children learn and experience in the following ways:

1. Reading (letters, words, numbers, pictures, drawing).
2. Childrens' programs through radio.
3. Childrens' television programs. (Hamadamin, 2016: 148).

2.1.6 Intellectual development and its aspects:

2.1.6.1 The stages of intelligence growth

The growth of intelligence goes through several stages as seen below:

- Stage of Emotional movement: This stage begins at birth up to the first two years of the child's age. In this stage, the child relies on the sensations and movements of the body organs to become familiar with the surrounding environment and learn about them. At this stage, he rarely resorts to the use of language and symbols because the activities of this stage do not need language and symbols. At the end of the stage the child learns language but does not know the meaning of things so whenever you hide something from them they search for it because his ability is limited on what he sees so anything that is far from feeling will be far from thought and this will be a good basis for the next stage.
- Pre-stage of rational processes (befor understanding logical processes): This stage will be between the years of (2-7). Here some important changes will occur that becomes the characteristics and appearance of the stage and separates it from the other stages, such as the development of languages and symbols, understanding and using concepts instead of the feeling and touching things, self-care and taking others for granted, for example, a ball means a ball even if it is not infront of the eyes. At this stage they have the ability to classify things and do not listen to the opinions of the surroundings and want to help themselves more alone but they still do not have a strong knowledge about the size, color and weight of the things. (Jamal, 2006:37)
- The stage of the process of material feeling: This stage is between the ages of (7 and 11). At this stage, the process of thinking in children is very logical and can feel the logical causes of natural phenomena. Children at this stage are free from selfishness and self-love and they start to love helping and caring about others. They also start doing the activities that need brain like finding solutions for the problems. They start to like being social and less being alone with accepting the opinions of others and listening to them (Jamal, 2006:37)
- The stages of mere thinking (the high process of mind): This stage starts at the age of 11 and above, where the child reaches the peak of intellectual development and intelligence. After this stage only the amount of intelligence increases not the kind of the diagram. At this stage the basis of the intellect of the child is the same as adults, only the amount of knowledge and expertise is lesser than them. They can understands most of the concepts such as justice, honesty, security, democracy..etc. At this stage they generally go for scientific thoughts and use assumptions to solve problems without returning to the material things. (Jamal, 2006:38)

2-1-7 Guidelines on the development of intelligence and strengthening child's brain:

Meal: Healthy meal is undoubtedly one of the primary sources and plays an important role in strengthening the child's mind. Foods like dry fruits, nuts, almonds, vegetables, milk and rich foods with beneficial and natural sugars such as honey and sea foods like fish.

Bedtime stories: Reading stories before bedtime does not only lead to a child's intelligence ،it also improves the child's thinking ،but also strengthens and improves reading and his desire to learn.

Playing freely: This does not include electronic and imaginary games, but according to psychology, playing a game with a friend that involves movement increases energy, strengthens personality and develops the child's brain.

Getting rid of stress and anxiety: According to the medical publications of the Journal of Psychological Medicine, the psychology of the child has a huge role and a small psychological problem might leave a negative impact on child's development. So parents must be sure about the comfort and happiness of their child and try to keep the child away from the family issues. (Kalhor, 2010:67)

2. 2 Literature Review

2.2.1 The research of (Mohammad Naji Shaker and Sana Naji Shaker, 2016) titled "The Role of Puzzle Games in the Governmental and Private Kindergartens of Najaf Governorate from the Perspective of Some Female Teachers".The aim of the research is to know the schedule of childrens' games in kindergartens of Najaf governorate and the difference of the games between the governmental and private kindergartens from the point of view of some teachers.The study sample consisted of (100) kindergarten teachers in which (50) of them were from the governmental kindergartens and the other (50) from the non-governmental kindergartens, and the Pearson correlation coefficient was used.The results of the study were:

- There is a teaching syllabus along with an educational goal in both the private and governmental kindergartens.
- The existence of a large number of children in a small aera of both kindergartens with no enough room for them.
- Small number of libraries and teachers.
- There is no time table to play in the daily activities of the kindergarten due to the limited time space especially in some of the non-governmental kindergartens in which they belief that games are not important, instead they care about another aspect or two.
- Noticing some behavioral problems among the children that may have an impact on the future of human development.
- Implementation of safe and healthy food conditions which affect the health of children and the future of the society (Shakir, 2016)

2.2.2 A Research by (Nihad & Ashash 2018-2019) titled "The Role of Teaching Tools in Improving the Education Process for Primary Students: The Fourth Grade as an Example").

The aim of the study is to identify the various educational tools used in primary schools to demonstrate the teachers' abilities in using teaching tools during teaching.

The sample of the study consists of (80) elementary fourth-grade teachers in the state of Boera and the researcher used the arithmetic mean , (T.Test) value and percentage to analyze the results.

The results of the study were:

- Educational and teaching tools significantly increase the level of achievement.
- There is a need to diversify the tools in the education process because it gives students more expertise.
- Most teachers are not familiar with how modern education is.
- In order to achieve the desired results, the process of education must be rich of educational tools (Ashash ، 2018).

2.2.3 A Research by (Mohammad, Samad Ahmad 2017) entitled "The Scientific Concepts of Kindergarten Programs and Their Relation to Intellectual and Behavioral Development of the Children" conducted at the University of Sulaymaniyah Faculty of Basic Education.

The purpose of this study was to understand the impact of the scientific concepts available in the programs on the development of intelligence and behavior of children.

A descriptive data analysis study was conducted that included all children at the kindergarten stage (more than 2,000 children) for the 2016-2017 studying year, among them only (100) children between the ages of (4 to 6) were randomly selected as the samples of the study.

It has also begun to extract the arithmetic mean, variance and t.test value at the evidence level of (0.01) for the types of scientific concepts of kindergarten programs and their relation to the intellectual and behavioral development of kindergarten children. Also the "IQ test" is done to compare children of both genders of the research sample.

The results of the research showed that the scientific concepts of the programs have an amazing effect on the development of the intelligence and behavior of the children of the sample in a way that spending their times at the kindergartens make them learn in a healthy and scientific way, not only the programs but their reaction is so much better with also surrounding environment, family and public devices and tools of the kindergartens beside learning about cultural, social and civil traditions in a healthy way (Muhammad 2021)

3. 1 The Research Method

Because of the nature of the research topic and its objectives, the descriptive data analysis method is used to conduct the research.

3.2 Research Community: Because of the large number of governmental and non-governmental kindergartens in Sulaymaniyah governorate, researchers chose only teachers of (5) governmental kindergartens and (5) of non-governmental ones as the research sample community. The below table explains the detail:

kindergartens	The number of both the kindergartens and the teachers of the research community	
	Kindergarten numbers	The number of teachers
governmental	145	1224
Non-governmental	34	235

total	179	1459

3.3 The Sample of The Study: The researchers took a number of teachers as the study sample from some of the kindergartens in Sulaymaniyah governorate consisting of (5) governmental and (5) non-governmental kindergartens, (10) teachers from each kindergarten, and that is (100) intentionally chosen teachers for the academic year of (2023-2024).**Table (3-1) the number of teachers in the study**

Sum	The number of teachers in the study sample			
	Number of Teachers	Private Kindergartens	Number of teachers	Governmental Kindergartens
20	10	Montessori Kindergarten	10	Tavga Kindergarten
20	10	High hope Kindergarten	10	Hanar Kindergarten
20	10	Sardam Kindergarten	10	Khanda Kindergarten
20	10	Qaiwan Kindergarten	10	Nregz Kindergarten
20	10	Mad Kindergarten	10	Rang Kindergarten
100	50		50	Total

3.4 Research tools: A prepared scale in the shape of a survey form to understand the effect of kindergarten programs on childrens' intellectual development from the teachers' point of view.

3.4.1 Description of the scale

Preparing a scale about the impact of kindergarten programs on the intellectual development of children from the point of view of teachers, after a deep search by the researchers and tracking the literature in this field from a variety of sources, a special and prepared measure for this purpose was selected by the researcher (Prof. Samad Ahmad Mohammad) from the School of Basic Education of Sulaymaniyah University for the academic year of (2020-2021) that is the most suitable for the purpose of our research in this field according to his opinion.

The scale consists of (18) paragraphs, all positive and Based on the method of "Likert" it has three options for answering, including (yes, sometimes and no) and the number assigned to the items are (3, 2 and 1) after passing the scale in the creation process according to the scientific procedures, yet to be more sure the researcher took out the psychometric measurements of the scale as shown below:

3.4.2 Truthfulness of the measurement

The truthfulness of the measurement is proved in the following ways:

A. Outward truthfulness

Our survey form was presented to a number of experts in the field of education, psychology, assessment and Kurdish linguistics in order to get their opinion on the items of the scale in terms of linguistics and science. All the sections of the scale were approved by them. Despite correcting the sections (6, 7, 9, 12 and 16) in terms of composition and linguistics.

B. The truthfulness of internal adjustment

In order to bring out the truthfulness of the internal compatibility of the scale, i.e. to find the relationship between each item of the scale and the general parameter, it is practiced on a small sample of kindergarten teachers of the Rozhawa Education Directorate , (10) from each kindergarten to create our research community.

This means during a week we took (100) teachers from the (10) kindergartens and we distributed the forms in two different dates, (Feb 26, 2024) and (Mar 4, 2024). Then we began to find the correlation coefficient between each item by using the Person equation and the total sum of the scale is shown in table 3-4.

Table (3-4) The value of the correlation coefficient between each item and the general value of the scale.

Level of statistical evidence	Correlation coefficient	N. of the item	Level of statistical evidence	Correlation coefficient	N. of the item

0,05	0,149	10	0,01	0,223	1
0,01	0,214	11	0,05	0,181	2
0,05	0,183	12	0,01	0,558	3
0,01	0,204	13	0,01	0,354	4
0,05	0,163	14	0,05	0,167	5
0,01	0,456	15	0,05	0,159	6
0,01	0,780	16	0,01	0,737	7
0,01	0,252	17	0,05	0,159	8
0,01	0,456	18	0,05	0,162	9

The value of the chart for the Correlation coefficient at the statistical evidence level of (0.05) is equal to (0.136). The value of the chart for the Correlation coefficient at the statistical evidence level of (0.01) is equal to (0.184). And the (3-5) table shows that (8) of the items of the scale are evidenced at the level (0.05) and (10) items at the level (0.01), thus the truthfulness of internal adjustment is proved.

3.4.3 Stability of the Scale

In order to ensure the stability of the scale, after applying the measurement to the initial sample by the researchers which consisted of (100) kindergarten teachers then analyzing the data by giving the score (1,2 and 3) to respond to the items, we started extracting the correlation coefficient of the scale in the form of a half-distribution between the answers of the odd and the even items using (The Jetman's equation for the distribution of halves) and as the result it turned out that the value of the correlation coefficient was (0.60) and then the value was modified through the use of The Sperman Brown Equation and thus the value of the relationship reached (0.72) and this is a suitable result to achieve the stability of the scale.

3.5 The to Be Used Statistical Equations

To analyze the data of the study the following statistical equations were used:

3.5.1 Cooper statistical equation

This is used in order to determine the satisfaction rate of experts on the items of the research which goes like this:

$$\text{Satisfaction rate} = \frac{\text{Satisfaction numbers}}{\text{Satisfied number} + \text{unsatisfied number}} \times 100$$

(Cooper,1974:27)

3.5.2 T-Test for Two Dependent/Related Samples

It used to check and find the research hypothesis:

$$T_{n-1} = \frac{\frac{\sum(x-y)}{n}}{\frac{\sqrt{n}}{S}}$$

Where:

$\frac{\sum(x-y)}{n}$: Mean value for the defference between two variables.

S: Standard Deviation

n: Number of observations of the sample

(Albayati & Abnasiyus, 1977:263)

3.5.3 T-Test Statistic Equation for Two Independent Samples

For the purpose of controlling the variables between the teachers of both groups of the study and extracting the results of the study.

$$T = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(n_1-1)\,{S_1}^2 + (n_2-1){S_2}^2}{b_1+b_2-2} \times \frac{1}{b_1} + \frac{1}{b_2}}}$$

Where:

$\bar{x}_1$: Mean value of the first sample

$\bar{x}_2$: Mean value of the second sample

n_1: Number of observations for the first sample

n_2: Number of observations for the second sample
$S_1{}^2$: $Variance$ of the first sample
$S_2{}^2$: $Variance$ of the second sample
(Albayati & Abnasiyus, 1977:260)

٣.5.4 Jetman Statistical Equation for Dividing Half

In order to determine the stability of the intellectual growth scale, the following criteria was used:
Rxx = The level of correlation and item differential
S_1 = The stable value of the odd items of the questions.
S_2 = The stable value of the even items of the questions.
S_{2X} = The stable value of the overall score

$$Rxx = 2\left(1 - \frac{S_1 + S_2}{S_{2X}}\right)$$

3.5.5 Sperman Brown Statistics

Simplification or manipulation of the Pearson correlation coefficient formula, r .
$r_x = \frac{2r}{1+r}$.
Where:

r_x: Pearson correlation coefficient.
r: Correlation between the two halves

(Hassan, 2005:22)

4-1 The Results of The Study were as Follows:

٤,١,١The result of the First Aim

The result of this aim was to "understand the impact of kindergarten programs on the intellectual development of children from the viewpoint of teachers, by testing the below hypotheses."

- **The Result of the First Hypothesis:**

To find the first aim the researchers used (one sample t.test) which showed that the value of (t) is (4.19) the arithmetic mean is (69.46), the scale deviation is (25.8), the hypothetical mean is (66), the free score of (99) and statistical evidence at the level of (0.05). Since the calculated value of (T) is greater than the value of the scheduled (T), by the meaning, the programs used in kindergartens are at a high level and has a direct effect on the development of childrens' minds from the perspective of the teachers as described in Table 4-1:
(Table 4-1)

Statistical evidence level	The scheduled (T) value	The calculated (T) value	Free score	Scale deviation	Hypothetical mean	Arithmetic mean	The sample of the study
Evidenced at the level of (0.05)	1.69	4.19	99	25.8	66	69.46	100

According to the table above, knowledge about the practices and programs used in the kindergartens are at a high level that might be because there are a lot of plans and concerns about teaching children in the kindergartens of the samples of our study.

❖ **Effect Size**

To understand the size of the impact of kindergarten programs on the intellectual development of children from the perspective of teachers, the various kindergarten subjects like (Kurdish ،Mathematics ،English ،poetry ، Music ،Art and Sports) that are used as the main subjects in the kindergartens are assessed.As a specific survey form as a scale was distributed among the teachers of our research sample, later on the data were extracted and solved using the (Eta Squared $^2\eta$ equation) for the size of the work and the results were presented in table 4-2.(Table 4-2) The size effect of kindergarten programs on the intellectual development of children from the perspective of the teachers

Size effect	Scale value	D effect value	Eta Value of Squared$^2\eta$	Calculated (T) value	Free score	

It's big	0.12	0.774	0.162	3.05	99	Used scale

As it's stated in table numbers (4-2), the value of (Eta Squared) is equal to (0.162) the size effect of (d) is equal to (0.774) which is greater than (0.12) the value of the scale. According to Cohen's analysis of the size effect we can say that the size effect of the use of kindergarten programs is big on the intellectual development of children. And this result is in line with the results of each of the researches of (Muhammad Naji Shakir and Thana Naji Shaker, 2016) and (Muhammad Samad Ahmad, 2017)'s research in which kindergarten programs and puzzle and physical games play an influential role in the physical and mental development of the study sample.

4.1.2 Results of the second aim: The aim was to show the difference in the educational programs of governmental and non-governmental kindergartens to the extent to which they affect the intellectual development of children. This was achieved by testing the hypotheses as follows.(Salih, F.M., Salih, M.H., Darwesh, F.T. and Abdulla, M.J., 2023)

❖ The result of the second hypothesis: It stated that "There is no statistical evidence at the level of (0.05) between the two arithmetic mean of the governmental and non-governmental kindergartens' educational programs and their affect on the mental development of children from the teachers' perspective."To prove the truthfullness of this hypothesis, we began to extract the arithmetic mean, the standard deviation and the (T) value through the use of t-test for two independent samples as described in the Table 4-3.(Table 4-3) The results of the t-test for the difference between the two arithmetic means of the practices and programs of the governmental and non governmental kindergartens and their affect on childrens' development.

Statistical evidence level	Free score	(T) value		Differential	Arithmetic mean	Kindergarten's program
		Scheduled	Calculated			
Evidenced at the level of (0.05)	98	2.000	3.02	55.57	11.56	Governmental
				42.17	17	Private

As shown in table 3-4, the value of the calculated (T) is equal to (3.02), the schedualed value at the evidence level is equal to (0.05), and the free score (158) is equal to (2.000). Since the value of the calculated (T) is greater than the schedualed value, we can say that there is a difference between the educational programs of governmental and non-governmental kindergartens and their affects the mental development of the children.

This result is similar to the results of (Nihad Ashash, 2018-2019), (Muhammad Naji Shakir and Thana Naji Shakir, 2016) and (Muhammad, 2017)s' research in which kindergarten programs plus mental and physical games play an influential role on the physical and mental development of the children of the study sample.

Similarly, they used governmental and non-governmental/private kindergartens as the samples of their study, relying on the extraction of arithmetic mean scores, Variance and t-test values at the evidence level of (0.01) and the statistical instrument equation of the Pearson's correlation coefficient.

❖ **Effect Size:**

In order to find out the effect size of educational programs in governmental and non-governmental kindergartens and their impact on the intellectual development of children, the data were extracted through the use of the (Abbas and others, 1982:43)'s equation for two related examples specially defined to the effect size of the work and the results are as shown in the table 4-4. **(Table 4-4) The result of the size effect of the use of educational programs in governmental and non-governmental kindergartens**

Size effect	Calculate value effect	Hypothetical mean	Suitable mean	Standard deviation	Arithmetic mean	Samples of the study
It's big	1.78	66	2.4	6.87	116.9	Governmental kindergartens
			3.1	8.35	137.2	Private kindergartens

As in table (2-4) appears that the values of the arithmetic mean for governmental and non-governmental kindergarten programs equal (116.9), for the standar deviation equals (87.6) and the suitable arithmetic mean for the use of governmental kindergarten programs equal (2.4) which is a huge value and tells us (Yes) Governmental programs leave an effect on children's intellectual development, on the other side the values of

the arithmetic mean of the programs in the non-governmental kindergartens equals (137.2), for the standard deviation equals (8.35) and the appropriate arithmetic mean for the use of non-governmental kindergarten programs equal (3.1) and this is a huge value and tells us (Yes) the non-governmental kindergarten programs leave a greater impact on children's intellectual development far more than governmental kindergarten programs and the value of the size effect is (1.78), this value is greater than the standard value which is (0.8) and the hypothetical arithmetic mean equals (66) according to Cohen's analysis of the evidenced level of size effect. So this proves that non-governmental kindergarten programs have a very positive effect on behavior and intellectual development of the children compared to those children that will not be registered in the kindergartens at all.

4.2 The Analysis of the Results

According to the results of the study, the researchers found that the programs used in the kindergartens are at a high level and have a direct impact on the mental development of children in the experimental group of our study which is a small example of the original Kurdish community, so we can say that the reason of the impact of programs on children's intellectual development goes back to the following explanations:

4.2.1 Governmental kindergartens are less financially supported compared to non-governmental (private) kindergartens, and that is why children in non-governmental kindergartens are most often in contact with the teachers and the environment of the kindergarten.

4.2.2 Having more educational and physical tools in kindergartens more than in houses and public places makes children like their kindergarten.

٤,٢,٣ Despite the shortcomings of the government and the Ministry of Education yet the environment of the kindergartens are still a suitable educational environment for the development of innovative minds in children.

4.2.4 The awareness of parents and teachers' abilities along side with the educational programs and modern teaching tools are the main reasons for the expansion of advanced thinking in children.

4.3 Conclusions

According to the results of the study, the researchers reached the following conclusions:

4.3.1 Educational programs in kindergartens have a direct impact on children's intellectual development from the point of view of the teachers.

٤,٣,٢ There is a difference in the procedures and programs of education between the governmental and non-government kindergartens.

4.4 Recommendations

According to the results of the study and in order to benefit from the results of the study, the following recommendations are given by the researchers:

4.4.1 The Ministry of Education's continuous monitoring on how to implement the plans of the kindergartens, especially the governmental kindergartens.

4.4.2 Taking advantage of the mechanisms proposed by the study to take practical advantage of kindergarten programs to further develop creative thinking in children.

٤,٤,٣ Working on the hiring the graduates of the kindergarten department and the removal of those who do not have kindergarden related specialty for care, supervision and teaching at the kindergartens.

٤-٤,٤ Opening the training courses to develop positive skills of kindergarten teachers.

٤,٤,٥ Special training courses conducted by experts to educate families about the dangers negative effect of electronic games on children.

٤,٤,٦ Paying more attention to children's educational programs and exercises in kindergartens.

٤,٥ Suggestions:

4.5.1 Taking advantage of the experience of developed countries regarding educational programs and trainings and transfer them to the kindergartens of the Kurdistan Region.

٤,٥,٢ Raising awareness of Kurdish families about the proper use of electronic games by their children.

4.5.3 Provide complete information about the experience of developed countries on how to manage and supervise children for kindergarten teachers in the Kurdistan Region.

4.5.4 More attention of the ministry of education to the children of the kindergartens, because the age of the child in the kindergarten is considered as the stage of personality building.

4.5.5 It is better for the media to pay more attention to educational issues so that families are aware of advanced global education.

References

Kurdish References:
1.Al-Rimawi, Muhammad Auda, Translation, Ari Osman Khayat 2010, In Child Psychology, Vol. 1, Erbil
2.Awaz, Abbas Mahmoud 2012, translated by Qasim Ali Sulaiman, Narin Printing House, Erbil
3.Aziz, Karim Ahmad (2012), Educational Program, Paywand Printing House, Vol. 1, Sulaimani.
4.Hama Baban and others, Ahmad Ali (2016). A selection of educational subjects for pre-school stage, Vol. 1, Tehran print agency, Jamal Erfan cultural foundation.
5.Hamadamin, Ramazan (2016), Childrens' Psychology in Kindergarten, Vol. 1, Sofia Press
6.Jamal, Sozan, 2006, Children's Psychology, Ministry of Culture press. Vol. 1, KindergartenTeacher's Guide (2017), Vol. 1, Mardin Press.
7.Karachetani, Karim Sharif, (2016) Developmental Psychology (Childhood Stage), Vol. 1, Piramerd Printing House, Sulaimani.
8.Mohammed, Samad Ahmad, 2021, Sulaimani University, A Scientific and Field Research
9.Qadir, Ramazan Hama Amin, (2020) Principles of Modern Education, Vol. 1, Saya Printing House, Sulaimani.
10. Siwayli, Idris (2017), Skilled Teacher and Successful Teacher, Vol. 1, Chawarchra Printing House, Sulaimani
Arabic References:
1.Abbas, Muhammad Khalil and others (1982), An Introduction to Research Methods in Education and Psychology, 2nd edition, Dar Al-Masirah for Publishing and Distribution, Amman, Jordan.
2.Al-Bayati, Abdul-Jabbar Tawfiq and Abnasius, Zakaria Zaki (1977): Descriptive and inferential statistics in education and psychology, National Library, Baghdad.
3.Ashash, 2019, Educational methods and their role in improving the educational process for primary school students - fourth year as a model, Journal of the College of Education, King Mansoura University.
4.Hassan, Al-Sayyid Abu Muhammad Abu Hashem. (2005): Meta-analysis indicators for self-efficacy research in light of Bandura's theory, College of Education Research Center at King Saud University - Kingdom of Saudi Arabia.
5.Nabhan, Ahmed Ibrahim Ahmed (2009), The Role of Residential Children's Hospital Directorates in Improving Educational Performance and Development in Gaza Space Institute, Faculty of Education, Islamic University, (Gaza). Palestine.
6.Shakir, Mohammed Naji Shakir and Tana Naji Shakir, (2016), game and its incident in governmental and private kindergarten educational institutions in Al-Najaf Governorate from the point of view of some female teachers, Journal of the College of Education, University of Najaf, Journal of Reading and Knowledge, p 831.
7.Salih, F. M., Salih, M. H., Darwesh, F. T., & Abdulla, M. J. (2023). Examining the Impact of Electronic Game Usage on Kindergarten Children's Behavior in the Sharazur District: Insights from Parental Perspectives. ANFUSINA: Journal of Psychology, 6(2), 1-22.
English References
1.Cooper, John D. Measurment and Analysis of BehaviouralTechniques,Columbus, ohio, Chales, E, Merrill, 1974.
2.Salih, F.M., Salih, M.H., Darwesh, F.T. and Abdulla, M.J., 2023. Examining the Impact of Electronic Game Usage on Kindergarten Children's Behavior in the Sharazur District: Insights from Parental Perspectives. *ANFUSINA: Journal of Psychology*, *6*(2), pp.1-22.