

## **The Effect of a Program based on Magic Math to Develop Self-Confidence and Concentration among Kanry Kindergarten Children in the City of Sulaymaniyah**

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### **Abstract**

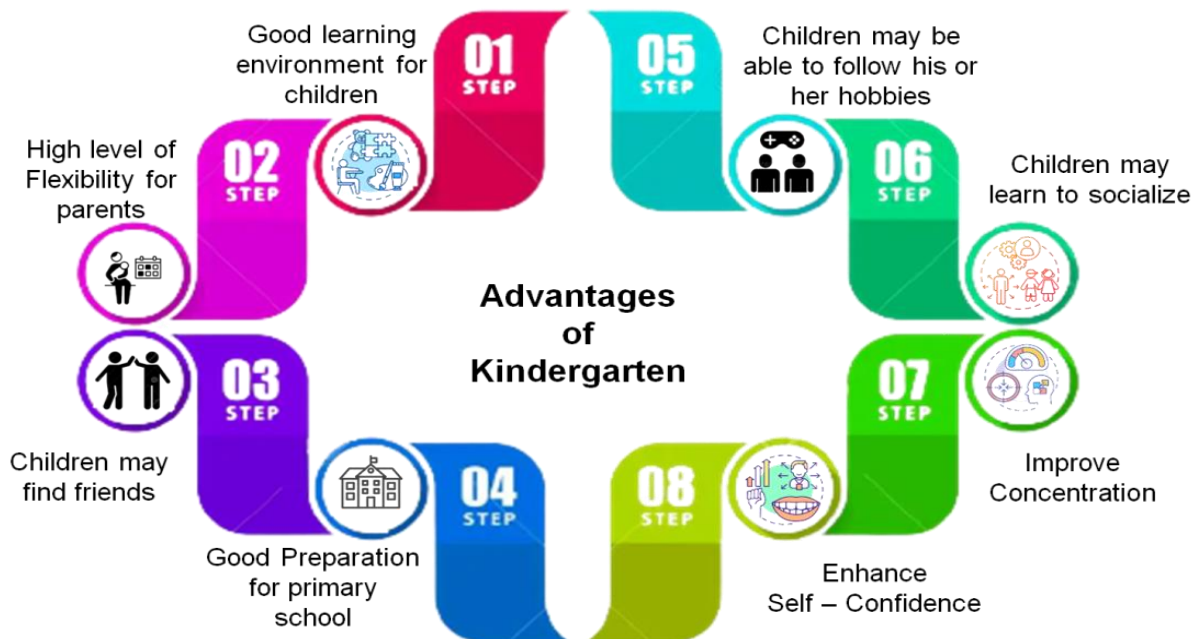
Kindergarten is a childhood instructional strategy that emphasizes playing, music, technical skills like painting, and group involvement as an element of the transformation from household to the classroom. The majority of kindergarten instructors have struggled throughout their careers to maintain self-confidence and concentrate on education while using innovation in the school. It is the ultimate goal of a kindergarten educator in a school environment to promote increased levels of self-confidence and concentration in kindergarten students. This is the most important objective of any school educator. Therefore, the purpose of this research is to incorporate magic math in Kanry kindergarten classes in the city of Sulaymaniyah so that children may improve their self-confidence and improve their ability to concentrate. This research investigates how participating in a program based on Magic Math (MM) might help Kanry kindergarteners in the city of Sulaymaniyah build self-confidence and improve their capacity to concentrate on tasks at hand. The Kanry kindergarten in Sulaymaniyah was where the information on the children was obtained. During the preliminary processing of this data, the min-max normalization method was used. An analysis of variance (ANOVA) and a chi-square test were used to conduct the statistical investigation of the effect. The effectiveness of magic math was evaluated utilizing many methodologies that were previously available. According to the findings, the magic math program enhanced the children's levels of self-confidence and concentration in the city of Sulaymaniyah's Kanry kindergarten schools.

**Keywords:** Kanry kindergarten, Magic Math, Sulaymaniyah, ANOVA, chi-square test, concentration, and self-confidence.

### **I. Introduction**

Learning in earliest childhood is distinct from that of pupils in secondary school and higher school in that the focus in early childhood education is on incorporating recreation into the educational process. It is well acknowledged that enjoying lays the groundwork for education in the formative days. Additionally, it's important to establish patterns and recurring topics at the start of the academic year to help students become ready. The ability to instruct successfully and with delight while using a range of tactics is thus required for all of the positions that Kanry kindergarten educators, in specific, play, including those of instructors, trainers, and external consultants. This is a vital time in a child's growth from the viewpoints of intellectual, emotional, and psychomotor growth. Providing interesting everyday activities in the classroom that encourage children's motivation, conversation, and socialization may therefore support their advancement (Fitrianiand Ilyas (2022)). During these early years, children automatically paint, sing, and narrate tales by creating their tales in their unique manner, and instinctively generate them by discovering different methods to do so. They also say adventures by dreaming up adventures about themselves. Children are born with a natural sense of self-assurance, which has to be nourished and developed beginning in the kindergarten stages. In kindergarten, children are required to disclose innovative thoughts that are fascinating and

useful, concepts that do not occur in each person, the ability to examine from a variety of angles, moving further than the data that has been provided, and the production of genuine products. Figure 1 depicts the advantages of kindergarten.



**Figure 1: Advantages of kindergarten**

Kanry Kindergarten surroundings are created in such a manner that a child is allowed to voluntarily collaborate with a variety of components, his or her ideas and imagination can emerge, and when they are capable of assisting with a child's self-confidence and positivity in general. Students who experience a variety of challenges can recognize those challenges, understand those challenges, and conduct experimentation, all of which contribute to the development of their self-confidence in such an atmosphere (Üret and Ceylan (2021)). A children's conviction in all of the facets of his abilities that he has is the foundation of his confidence, and this trust provides him the sense that he is capable of accomplishing many different objectives throughout his life. It implies having faith in its capacity to find solutions to both tasks and issues. Children who strongly believe in their abilities and that they can manage their lives and make plans to be better truthful. One's idea that one can complete a variety of life objectives is an essential component of self-confidence. Self-confidence can be broken down into its parts as follows: a. Trusting ourselves to accomplish a variety of activities; b. Believing in ourselves to satisfactorily finalize a variety of duties and realizing that other individuals will value the strengths owned us; c. Believing in our capability to navigate novel circumstances; d. Have faith in both our discretion and our basic understanding (Wulandari and Handayani (2021)). One of the primary aspects that might influence education is concentration. By definition, concentration is the activity of focusing all of one's mental energy on a single object at the expense of all other, irrelevant concerns. Children are expected to give great concentration to the instructor, focus on what they receive, observe, and concentrate on when they are in class, react to the professor's instructions, and allocate any other activities that are not directly linked to the subject. Concentration has a crucial function in the learning process. The scattering of concentration to a subject is what prevents a student from maintaining concentration during learning. All children learning initiatives are driven by pupil concentration, which guarantees the stream of education, provides education tasks purpose, allows pupils to accomplish topic learning goals, and makes education possible at school (Pramadi et al. (2022)). Magic math is a unique way for Kanry kindergarten children to study and understand mathematics.

Magic math is the ability to measure and it signifies an integer. The analysis of numbers particularly the characteristics of the standard mathematical computations, addition, subtraction, multiplication, and division is the focus of this discipline of math. Any math lesson may benefit from the excitement and enchantment that math magic techniques bring to the subject. Additionally, as children advance, math magic develops a new environment for mathematical thinking. And, it increases the children's enthusiasm for learning education (Luna et al. (2020)).

### **Contribution of the study**

- ♣ This study examines how a Magic Math curriculum would help Kanry kindergarten children in Sulaymaniyah build their self and concentration.
- ♣ The children's data were collected from Sulaymaniyah Kanry kindergarten.
- ♣ The min-max normalization technique was used to preprocess this data.
- ♣ ANOVA and the chi-square test were used to statistically examine the impacts of magic math.
- ♣ Magical math's performance was compared to that of traditional methods.

## **II. Existing Works**

The difficulty that Kindergarten children have in comprehending the Pancasila ideals is a subject that (Erawanto and Triantoro, (2022)) have to investigate. This study is an example of a classroom activity investigation that was conducted in phases while using the Kemis and Tagart models. The phase is comprised of the following 4 phases: Increasing children's levels of self-confidence may be accomplished through the following steps: 1) organizing, 2) putting classroom activities into activity, 3) watching, and 4) reflecting on those actions. The purpose of this research is to investigate whether or not engaging young children in physical activity helps them develop higher levels of social cognition and improve their ability to focus. It is not modifiable to accommodate all children's (Huang et al. (2022)). Jarraya et al. (2022) investigated the effects that kindergarten-based periodic muscle relaxation (PMR) has on the concentration and cognitive performance of children aged 5 to 6 years old. Children's will be able to enhance their concentration with these relaxing techniques. It is not much beneficiary technique. Arslanand Kartal (2022) suggested this research to ascertain the impact of using the cooperative learning technique together with organized content in coding seminars on the foundational skill levels of kindergarten pupils and to assess them along with the views of instructors and families. In one of the original study sections, the cooperative learning approach was employed, and the current teaching approach was used to boost concentration. Not all students can acquire concentration with it. The study had three objectives: (a) to test the effects of an early morning exercise training (Dynamic Beginning) on educational outcomes, validation control, and concentration capabilities; (b) to test the effects of Engaged Beginning on anthropometry; and (c) to determine whether the fitness and strength elements are moderators of the project's academic achievement, preferential awareness, and concentration power in kids (García et al. (2020)). Köble et al. (2022) investigate the measures of physical fitness (PF) among elementary school students and looks for correlations between PF, focus, and health-related reliability of life in an absence of overt. Children of elementary school age who are physically active have greater focus and attention spans. However, to better understand the intra - individual correlations between PF and concentration throughout child maturation and to design focused preventative initiatives, continuous information is required. Oluwakemi and Adebayo (2020) used a quantitative technique to investigate how improving focus and self-assurance affected the educational outcomes of kindergarten school students in the Jalingo metropolitan. The research sought to identify connections between children's eating habits and their academic success. The nutritional status of children's may enhance focus. Everyone cannot get nutritional foods daily. The above-mentioned techniques are not addressed the drawbacks.

### Problem statement

Concentration, the steady application of one's mental resources toward a single goal, is an essential skill for any education. Due to its crucial linkages to intellectual, interpersonal, and behavioral development, and daily living, it necessitates training outside of courses. It enables children to utilize their resources more effectively and address issues more quickly. Self-confidence is the ability to have faith in one's skills. It provides opportunities and motivates children to take chances, use their imagination in class projects, and put effort into their academic studies. For pupils, concentration and self-confidence are more crucial. Consequently, kindergarten children's concentration and self-confidence should be improved. Hence, we investigated how a Magic math-based curriculum affected kindergarteners in Sulaymaniyah's ability to concentrate and gain self-confidence.

### III. Research Method

This research investigates how educating Kanry kindergarten students in Sulaymaniyah, Iraq, Magic Math might assist them in developing their self-confidence and their ability to concentrate. The Kanry kindergarten in Sulaymaniyah was where the data on the children were gathered. The preprocessing method used for this data was the min-max normalization method. The effects of magic math were statistically analyzed using analysis of variance (ANOVA) and the chi-square test. The effectiveness of magical mathematics was evaluated in comparison to that of conventional approaches. The proposed flow is illustrated in Figure 2.

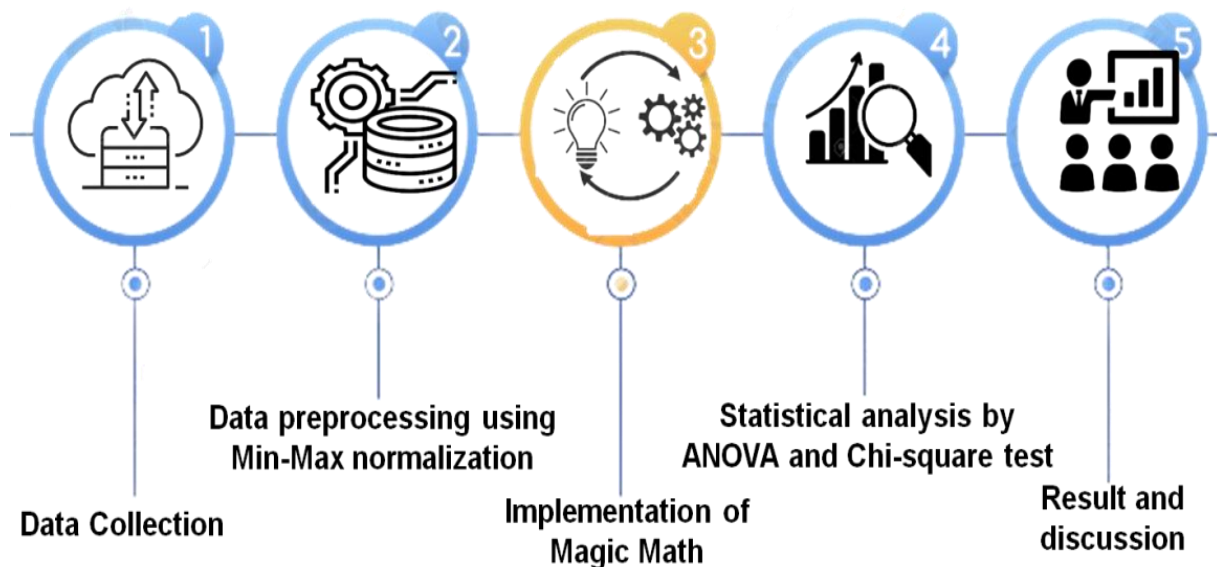


Figure 2: The proposed flow

#### A. Data collection

This cross-sectional research was carried out on Kanry kindergarten pupils in Sulaymaniyah city, Kurdistan, Iraq, between the dates of November 9, 2015, and August 29, 2016, on a total of 476 children, such as 239 boys and 237 girls, from various socio-economic contexts. The investigation was carried out in five preschools, both federal and non-governmental. A specialized survey was used to gather the information needed for this study. It included details on the gender, birth weight, gestation, kind of diet, level of physical functions, amount of time spent viewing television and playing video gaming, and details about the parents (occupation and comorbidities). Throughout the

discussion with the families, precise answers were provided to the queries, and data such as weight and BMI percent for age and gender were collected (Al-Hamwandi et al. (2021)).

## B. Preprocessing

### Min-Max normalization

Min-max normalization is a data processing method that is frequently utilized to retain the important properties in a database about children. This approach involves comparing the minimum and maximum values of the values in the database. The original database values are then standardized via the use of a min-max normalization procedure, which takes into consideration both the minimum and maximum values included inside a database. A quadratic modification is performed on the initial dataset when using the min-max normalization procedure. Its primary value lies in its categorization capabilities, and it has been put to utilize in a wide variety of tasks, including artificial intelligence, segmentation, categorization of closest neighbors, neural networks, and many more. The primary goal of the approach that has been provided is to normalize the source database  $D$  into a conserved version of dataset  $D'$  that satisfies the security standards with little loss of data and high levels of data privacy. This target will be achieved by using the method. The suggested technique focuses primarily on data conversion using min-max normalization, with the end goal of making modifications to the values of the source dataset. The values of each character in a database are normalized by first being mounted such that they all fall inside the minimum user-specified limit, which may be 0.0–1.0 in our example. The following Equation 1 is used to generate the recently calculated value within the user-specified area to convert a value,  $V_i$ , of element  $A$  from the range of  $[max_A - min_A]$  to  $[new\_max\_new\_min_A]$ .

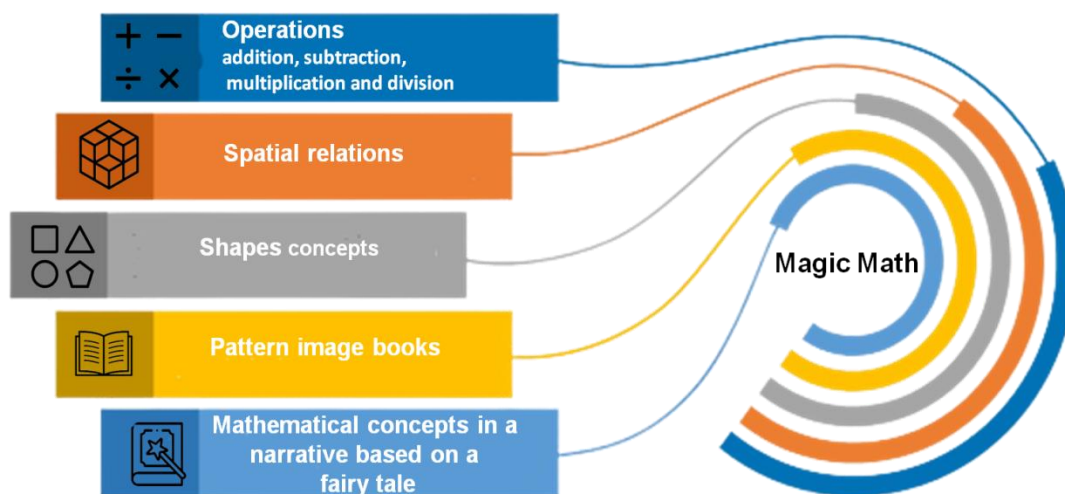
$$V_i' = \frac{V_i min_A}{max_A - min_A} (new\_max\_new\_min_A) + new\_min_A (1)$$

$V_i$  is the currently computed value. The associations that existed between the source values were able to be maintained after using the min-max normalization procedure.

## C. Implementation of Magic Math

Math is a scientific discipline that focuses on the investigation of motion, area, organization, and excellence. Math is concerned with discovering patterns, coming up with new suppositions, and determining the truth through the use of logical reasoning from concepts and theorems that have been carefully selected. Math is an excellent tool for developing mental discipline since it promotes logical thinking and cognitive diligence and is an enjoyable method to do it. In addition, having a strong foundation in mathematics is essential to comprehending the material covered in a variety of other academic disciplines, including physics, political science, and even music and the arts. The practice of magic involves the casting of spells or the casting of charms, both of which are thought to have a mystical ability over natural forces. Magical rites and invocations are employed to bring about desired effects and peculiar talent or influence that seems to derive from some unknown source of power. For a very long period, mathematics and magic have gone hand in hand. In the time of Pythagoras, numerals were associated more with mystique than with spell casting. Nevertheless, findings such as the triangle formed by the digits "3, 4, and 5" were sufficient to convince people that some numerals must have mystical properties. The participation of Kanry kindergarten instructors and students in magic math activities together may be beneficial to the students. Magic Math is a unique approach to understanding and achieving in education, for young kids. The objective of the Magic Math method was to encourage rigorous observation and study of children's cognition, as well as to boost children's confidence and ability to concentrate. The strategy stressed an accessible manner to display relationships between young children, which parents, teachers, and other adults in charge of young children may utilize as examples for entertaining young children. The following mathematical principles were covered in the video: (1) the four

processes of addition, subtraction, multiplication, and division; (2) spatial relations; (3) shapes; (4) pattern picture books; and (5) mathematical concepts in a narrative based on a fairy tale.



**Figure 3: Magic Math approach**

Figure 3 depicts the magic math approach. The subject decision for the strategy was, to a considerable extent, driven by exploratory research. We considered some different aspects, such as which mathematical concept should be highlighted in the methodology, and how best to illustrate situations in which children demonstrated logical reasoning. This method demonstrated how children comprehended, reacted to, and managed magic math, as well as its effect on focus. We used the strategy to zero down on certain aspects of mathematics, and we intertwined early mathematics learning ideas, such as how to steer a child in the right direction or how to assess a child's self-confidence.

### **i. Operation**

A young kid can think about addition as the merging of two or more groupings. The Operations is concerned with a straightforward addition issue. This demonstrates how an adult responds when a youngster makes a mathematical error. For instance, a child could struggle to properly answer a math issue on the first attempt and might need to consider it many times before understanding the idea. If a teacher corrects the child in a hurry, they may never understand what the youngster knew about the assignment; instead, they might just discover that the child struggled to get the right answer on the first attempt. The first chapter in The Operations Magic Math was titled "Young Children's Addition." What do preschool children know about mathematical processes like addition, the instructor queried. The instructor said, "[Children] may not grasp written issues like these (4 + 3) or complex spoken questions like, "What is 4 plus 3?""] Two graphics of 4 + 3 are shown, as well as a thinking question. The children were given a narrative problem concerning toy animals by the instructor. The narrative was introduced by the instructor with a rabbit and a squirrel. The teacher said, "The squirrel has four carrots, and the rabbit has three." The children were asked by the teacher to clarify how many carrots the rabbit and squirrel in the narrative received. The little girl verified her knowledge by precisely repeating the numbers. The instructor then inquired of the youngster, "How many carrots are there in total?" The little youngster first added the numerals wrongly, believing that "six" was the result of adding 4 and 3. How did you figure it out? The adult inquired rather than addressing the youngster. The youngster explained her reasoning, stating, "I, like, had in my mind a four and a three." The child's remarks were complemented with an image of carrots to show the child's mental process as they applied to addition. The little girl claimed to have mentally seen the carrots and to have shifted one over to the number four to make it five and the

other over to make it six. She described how she mentally transferred one carrot to the other group while counting one thing at a time. The little girl noticed her arithmetic mistake at this time. Is there anything remaining, the instructor then inquired? The youngster then completed the math of 4 plus 3 by saying, "Yes, seven." The student correctly estimated the entire amount, according to the instructor. Teachers might "Make up your addition tales and integrate them into creative play," the instructor said. This demonstrated the significance of helping kids to understand and explain a math issue before concluding. Even when a youngster adds little amounts incorrectly, an adult is not required to fix them right away. Adults may engage in children's thought processes and progressively lead them to the right solution by using suggestions and discussions. It will enhance their self-confidence.

## **ii. Spatial relations**

The connection between items in a space is referred to as spatial relations. Kanry Kindergarteners use spatial linkages when they say things are "in front of," "on top of," and "beneath" other items. Young kids that have spatial awareness may find items in a room. Pupils can determine the position of an item about others and themselves by using spatial reasoning. Children may convey their wants, describe their environment, and arrange objects in their surroundings by using spatial language. We can sharpen their focus by doing this. Geometry was the first word in the Spatial Connections Magic Math Minute movie, which highlighted a kid's interest in spatial relations. What comes to mind when you conceive about geometry, the instructor questioned the audience. Most likely, they consider form. Do you also consider space, your teacher continued. The instructor continued by describing spatial relations as a crucial component of geometric knowledge, or understanding where one thing is about another. Children watched as the instructor moved on to laying four red chips at a time in a horizontal line across a cardboard grid layout after saying, "One approach to figure out what kids understand about space is to utilize grids." Can you create yours exactly like mine? the instructor questioned the youngster. The youngster completed the horizontal line assignment utilizing her grid and cheered. The instructor then instructed and encouraged the students to independently repeat the arrangement of chips in a more complicated connection. After, the children are appropriately positioned. Children in Sulaymaniyah's Kanry kindergarten class had better concentration skills as a result.

## **iii. Shapes concepts**

At an early age, children begin to recognize and name shapes including circles, triangles, squares, rectangles, and ovals. Children frequently employ a visual image rather than counting the number of corners when identifying shapes like triangles. Typically, an equilateral triangle or a right triangle serves as the conceptual template for a triangle. Because it differs from the mental representation of a triangle, a preschooler could not recognize an obtuse triangle as a triangle. Teachers may use alternative triangle types, such as isosceles and scalene triangles, and their characteristics (such as having three sides and three corners), to combat this inclination. Children may also be shown triangles that have been rotated or orientated differently by their teachers. Teachers present children's with numerous geometrical forms, then ask those questions and encourage their responses. It is suggested that children play with these shapes. And chat with their friends about it. The children can make shapes with clay. The shape characteristics can be asked of the children and find out the shape. It boosts their interpersonal skills and communication confidence.

## **iv. Pattern image books**

Materials, symbols, or words are arranged in patterns when they are repeated in a logical and structured manner. Children may use their experiences to generate predictions when they can spot recurring patterns. Children may learn difficult arithmetic procedures and number concepts by first recognizing patterns. The children's are invited to create the pattern with their friends and design it. Children were instructed to discover the pattern, which may be altered. While interacting, a child could understand a teacher's query regarding the repeated pattern incorrectly. In

this, a young English language student and a teacher are seen reading a pictorial book with patterns. This demonstrates how crucial it is to examine the variations between how a person asks a question and how a child could understand or react to that inquiry, particularly if the child is learning a new language. Additionally, it demonstrates how kids may use imagery and words to draw logical conclusions about what follows next in a sequence. Children who are beginning to comprehend mathematical connections and recognize patterns benefit from developing their thinking skills by making forecasts. It can be necessary for the instructor to ask the same question many times or to phrase it differently before the student can answer it. Children's concentration may be increased by employing patterns.

**v. Mathematical concepts in a narrative based on a fairy tale**

A fairy tale is an old narrative that has been passed down from generation to generation and is often geared toward children. These tales often contain fantastical beings and magical powers. Children take pleasure in reading fairy tale books, and these stories teach them valuable lessons at the same time. Children's ability to concentrate and their sense of confidence in themselves may be bolstered by reading them stories based on fairy tales. The children's were able to understand how a (digital) narrative that is not specifically about mathematics may be utilized to learn mathematical ideas like size and quantity because of this. This also exemplified the fact that dialogues about mathematics may take place between a youngster and a teacher in any child's native language. The stories of fairy tales are told by the teachers, and they often include wonderful and exciting ideas. Following the reading of tales to the children, mathematically oriented questions were interactively posed to them. How many other princesses in these tales behave similarly? They have the option of asking the pupil to recount the events again. The children's are encouraged to pose their queries and may do so if they like. The children's self-confidence and ability to concentrate are both improved as a result.

**D. Statistical analysis**

**i. Analysis of variance (ANOVA)**

Research on the effectiveness of a program based on Magic math to improve self-confidence and concentration among Kanry kindergarten students in the city of Sulaymaniyah is explored and analyzed using criticality in various sectors as a conceptual technique. An ANOVA research demonstrates the influence of magic math and how it promotes and enhances the confidence, concentration, activities, perspectives, attitudes, and principles of kindergarten children. The study also shows how magic math focuses on how it represents assistance and strengthens these aspects. To assess the validity of the assessments themselves as a whole as well as the validity of the magic math technique and content, preliminary data analyses were carried out. The investigation's goal was to determine if kindergarteners were impacted by magic math. The ANOVA study looked at how successful the technique was, as well as its substance and its overall quality. The effects of magic math were investigated using an ANOVA, and the findings revealed that Kanry kindergarten students were more severely impacted by magic math.

**ii. Chi-Square test**

The Chi-square test is a statistical method for comparing actual outcomes to forecasts. A disparity between actual and expected data is tested using this method to see whether it is the product of chance. The expected consumption is predicated on the premise that there is no association, therefore the actual response data should depart from the anticipated data more if there is a substantial correlation between the two nominal variables. Even if we had discovered a connection, it doesn't provide any further information. Chi-square analysis was used to investigate correlations between various patterns. The results of the association chi-square test showed data that did not support the null hypothesis. An analysis of the effectiveness of a Magic math-based program to boost Kanry kindergarten students' concentration and self-confidence in the city of Sulaymaniyah using the Chi-Square test found that Magic math had a stronger impact on Kanry kindergarten children.



**IV. Result and Discussion**

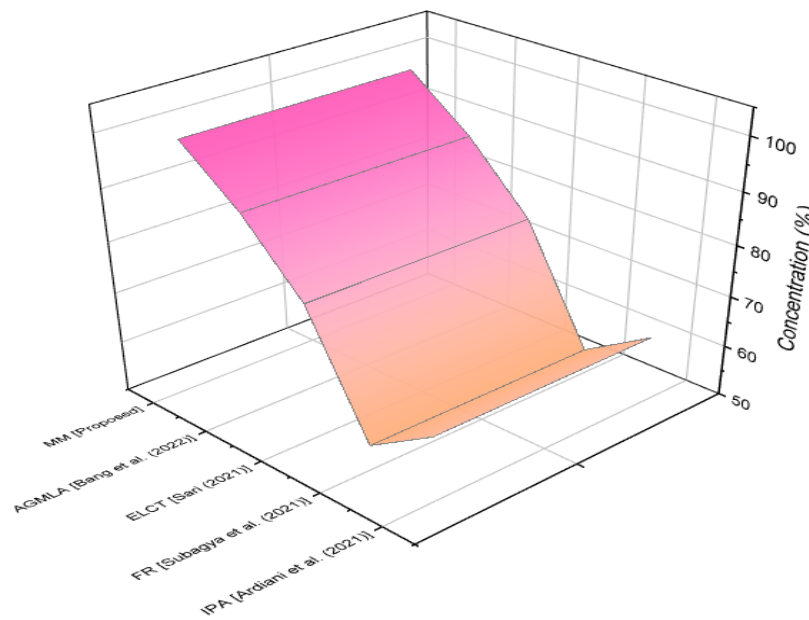
This section investigates the effect of a program based on Magic math to develop self-confidence and concentration among Kanry kindergarten children in the city of Sulaymaniyah. The effectiveness of magic math was compared and analyzed with existing approaches.

**i. Concentration**

Controlling one's focus requires concentration. It is the capacity to concentrate on a single concept, idea, or topic while blocking out all other irrelevant thoughts, emotions, and experiences. Children in Kanry kindergarten have better attentiveness when they use magic math (MM). The concentration of Kanry kindergarten children is shown in figure 4. Table 1 shows the concentration of existing and proposed approaches.

**Table 1:Concentration of existing and proposed approaches**

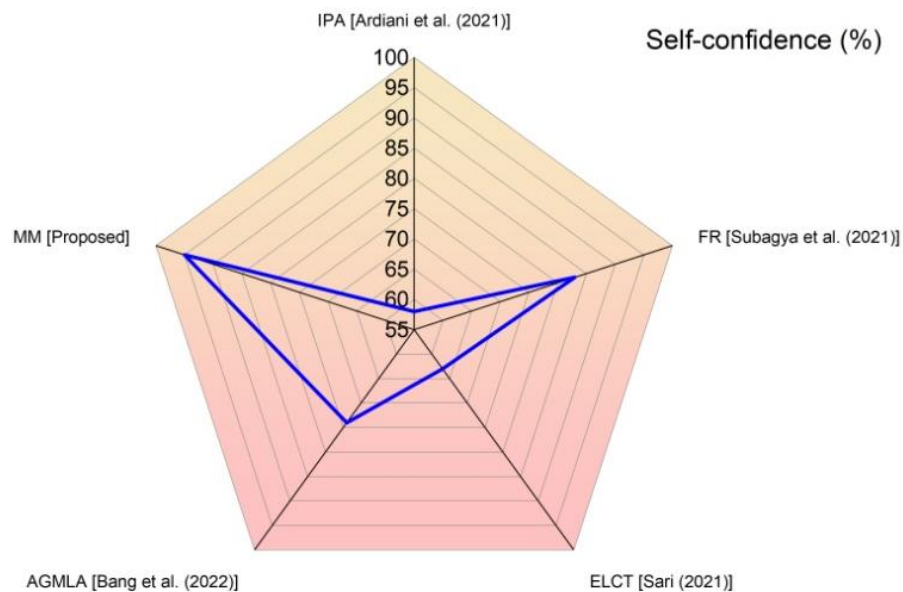
Techniques	Concentration (%)
IPA [Ardiani et al. (2021)]	63
FR [Subagya et al. (2021)]	55
ELCT [Sari (2021)]	77
AGMLA [Bang et al. (2022)]	89
MM [Proposed]	98



**Figure 4:Concentration of kindergarten children**

**ii. Self-confidence**

Self-confidence is the ability to have faith in ourselves. Children who are willing to accept changes in their education and recover from rejection or hardship must have self-confidence and a sense of capability. Figure 5 depicts Kanry kindergarten students' self-confidence levels. It demonstrates how magic math boosts Kanry kindergarteners' self-confidence. Table 1 shows the concentration of existing and proposed approaches.



**Figure 5: Self-confidence of Kanry kindergarten children**

**Table 2: Self-confidence of existing and proposed approaches**

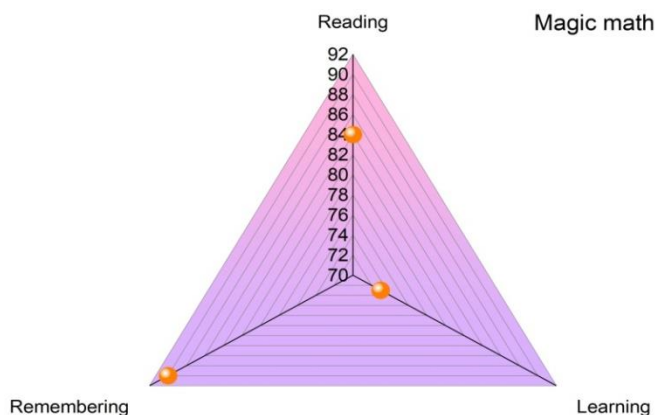
Techniques	Self-confidence (%)
IPA [Ardiani et al. (2021)]	58
FR [Subagya et al. (2021)]	83
ELCT [Sari (2021)]	63
AGMLA [Bang et al. (2022)]	74
MM [Proposed]	95

**iii. Cognitive skills**

The fundamental abilities the brain requires to think, read, learn, remember, reason, and pay attention are known as cognitive skills. Children in Kanry kindergarten require fundamental abilities including reading, learning, and remembering. These abilities are enhanced by the use of magic math. Figure 6 depicts the cognitive skills of Kanry kindergarten children. Table 3 shows the cognitive skills of existing and proposed approaches.

**Table 3: Cognitive skills of existing and proposed approaches**

Cognitive skills	Magic math
Reading	84
Learning	73
Remembering	90



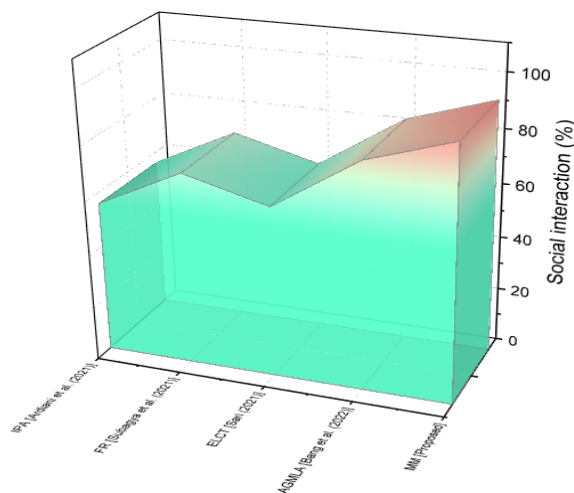
**Figure 6: Cognitive skills of Kanry kindergarten children**

**iv. Social interaction**

Social interaction is crucial to children's learning. It has been shown that engaging with other children may help children better organize their ideas, evaluate their learning, and spot any holes in their logic. The social interaction of Kanry kindergarten children is shown in Figure 7. Table 4 shows the social interaction between existing and proposed approaches.

**Table 4: Social interaction of existing and proposed approaches**

Techniques	Social interaction (%)
IPA [Ardiani et al. (2021)]	56
FR [Subagya et al. (2021)]	71
ELCT [Sari (2021)]	63
AGMLA [Bang et al. (2022)]	83
MM [Proposed]	93



**Figure 7: Social interaction of Kanry kindergarten children**

## Discussion

The aim of this study (Ardiani et al. (2021)) is expected to locate any space plan required in a Kanry kindergarten using the Interactive Playground approach (IPA) and build novel features that can assist children's interests in education so that they may improve their concentration and learning of young kids. For the Interactive Playground feature to be implemented, it has to have large classroom environments. Foot reflexology (FR) is completely risk-free and may even be performed on children. The goals of this research were to evaluate whether or not foot reflexology may alleviate the behavioral and emotional issues that are common in kindergartners, as well as boost their self-confidence and ability to concentrate (Subagya et al. (2021)). Sari (2021) implemented the educational learning media Counting Tree (ELCT) because he believed that doing so would make it simpler for children's to understand how to count while also making the process more fascinating and enjoyable for them. Children will have more self-confidence as a result of this, their memories will improve, and they will have a greater desire to continue their education as a result of self-confidence. This research explored whether the utilization of an Adaptive Game-Based Math Learning App (AGMLA), which offers customized experience and responsive integrated evaluations to sustain established courses, can enhance learning objectives and interaction for Kanry kindergartners and whether it can enhance pupils' participation, encouragement, and confidence in the process of gaining knowledge (Bang et al. (2022)). These techniques do not apply to all children.

## V. Conclusion

Kanry Kindergarten offers opportunities for learning through games and social engagement. Additionally, it offers a foundation for participating, existing, and growing, enabling kids to develop into competent scholars in a secure and encouraging atmosphere. Children get the chance to improve their interpersonal skills owing to it. They form bonds with other kids and develop alongside them. Concentration and confidence are more important for students. We investigated the impact of a program based on Magic math to create self-confidence and concentration among Kanry kindergarten students in the city of Sulaymaniyah to increase kindergarten students' concentration and self-confidence. Data on children were gathered in the city of Sulaymaniyah. According to the findings of this research, magic math's (MM) efficiency in boosting Kanry kindergarten students' concentration and self-confidence is greater. The results were contrasted with current methods. This demonstrates that magic math is advantageous. Future versions of magic math could include other types of techniques that would benefit Kanry kindergarten children.

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