SLM-07

Action Research Report

Name of the Practitiner: M.Mahalakshmi, Lecturer

Topic: Developing the skill of mathematics through math club among primary teachers

1. Introduction:

Math is for everyone and everywhere in the society. But some children fall into the learning pit and never get out of it because they doubt their math abilities and never start the process of aiming for greater depth in math.

Children of all ages and abilities should be encouraged to join a math club in order to experience learning in different ways alongside children from different year groups. This helps children share ideas and strategies and cultivates their mathematical development.

A math club should be of interest and open to children of different ages, considered different ability levels, and reflect different motivations for attending.

2. Background of the Action Research:

One of the major aims of teaching mathematics is to create interest and to remove the fear of the subject. A good mathematics teacher can involve the students in several co-curricular activities such as Mathematics Club, Mathematics Fair, and Mathematics Laboratory. Mathematics Club helps the students in having an idea of the practical utility of mathematics in addition to creating their interest in Mathematics. Maths clubs raise the profile of maths as a subject, they increase engagement and show children that maths can be playful, exciting and full of wonder.

Holding a weekly maths club lets us take off our curriculum jacket and work more informally with children while engaging them in a variety of activities for mathematical sense-making. Joining a maths club is voluntary, but pupils throughout our school should be encouraged to enroll so they can experience learning maths in

different ways. Working with peers from other classes and same groups helps children develop their collaboration skills and cultivate their mathematical development.

Positive attitudes are associated with higher levels of maths achievement and math clubs have the potential to really make a difference by feeding these attitudes back into regular lessons. An effective maths club can help interest in math spread.

3. Identification of the problem

During my school visits, the primary school teachers are teaching the content only present on the text book. Sometimes students are memorizing some math concepts. So in order to create interest on math, the investigator chosen the topic.

4. Need for the action research

A maths club is a chance for everybody to have fun with maths in an entirely non-judgemental, and ideally relatively free flowing environment. It can happen at any time of day outside timetabled lessons. At primary school maths is a popular after school club, but you could equally hold it as lunchtime maths club or even before school. It should feel noticeably distinct from a maths lesson and the maths club activities you offer, should, wherever possible, be fun, or at the very least, engaging and possibly even surprising for children. It creates interest on math among primary children.

5. Statement of the problem:

"Developing the skill of mathematics through math club among primary teachers.".

6. Objectives of the Action Research:

The primary school teachers are able to,

- understand the need of a math club
- plan the club activities
- create interest on math among the primary students

7. Probable causes for the problem

- Lack of awareness about math club
- Teachers attitude towards math concepts. They thought that teaching concepts from math book itself enough to get good marks.

8. Action Hypothesis

There is a significant difference in the pre and post test scores of effectuating a math club among primary school teachers.

9. Methodology

a. Sample:

30 primary school teachers handling fourth and fifth standard from Pethanaickenpalayam block.

b. Research Design

Single group experimental design

c. Description of the Research tools

To obtain the required information needed for the study, questionnaire form of research tool has been used. The questionnaire consists of 20 questions with five point scale (Always, often, sometimes, rarely and never). The score given for five point scale is 5,4,3,2 and 1. The questionnaire consists of both positive and negative statements. The same questionnaire was used for both pre-test and post-test.

d. Description of the Research process

- Data collection
  - Pre - test

    Pre-test was conducted for the 30 primary school teachers in order to evaluate the prior knowledge in developing a math club.

- Intervention

One day workshop was conducted to utilize the module consist of methods and techniques to create a math club. During the intervention, teachers are asked to prepare some math club activities as in the module.

  - Post test

    After the intervention, Post-test was conducted for the same 30 primary school teachers in order to evaluate the math skill through math club.

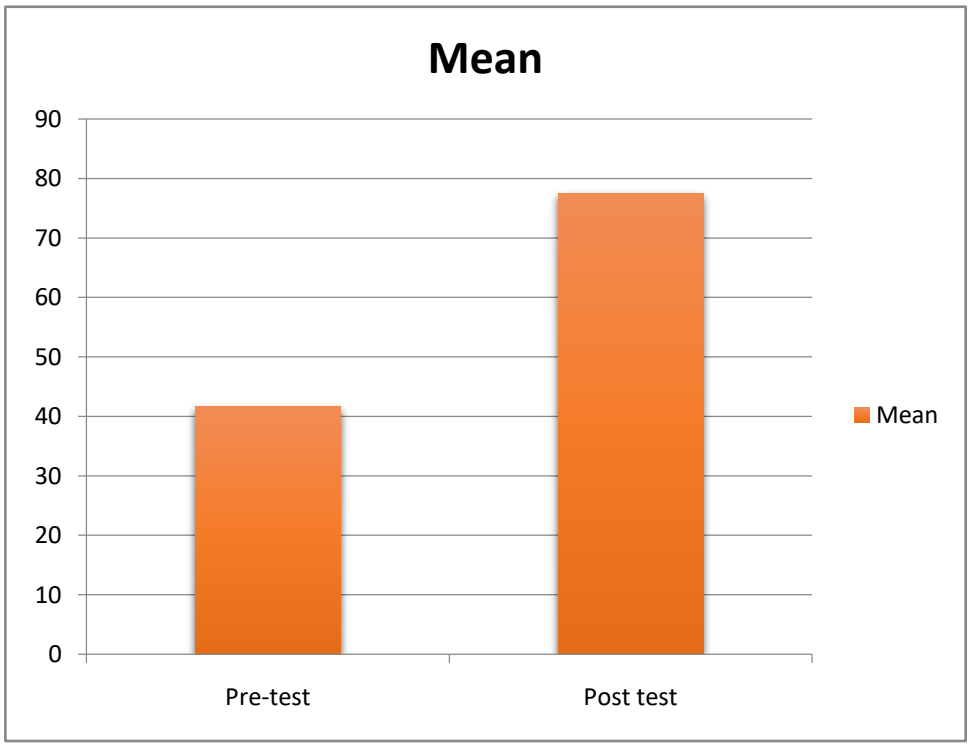
- Data analysis

The purpose of this research project was to determine the math skill through math club among the primary teachers. Pre-test was conducted to understand their prior knowledge with a five-point scale questionnaire consist of twenty questions. Then the intervention was carried out for the primary teachers through one day workshop with a module. Teachers are informed to practice the math club activities to improve the math skills among the primary students for a period of time. Post test was conducted with same questionnaire. Collected data were analyzed by using mean.

Mean of pre-test and post test scores

Test	Number of Teachers	Mean
Pre-test	30	42.15
Post test	30	74.65

Chart shows the mean difference of pre-test and post test scores.



10. Data analysis and interpretation

The data analysis of the mean score of the pre-test was 42.15 and post-test was 74.65. This shows that teachers are able to conduct a math club at primary schools

11. Findings of the Action Research

The data analysis of the mean score of the pre-test and post-test enabled the practitioner to arrive at the following findings.

After completing the research, the primary school teachers are able

- understand the need of a math club
- plan the club activities
- create interest on math among the primary students

12. Net gain of the Action Research

This research helps the primary school teachers to develop a math club in their school and to understand the need of a math club. The teachers are interested to plan the club activities and they are able to create interest on math among the primary students

13. Educational implications of Action Research

A math club offers significant educational benefits by fostering a positive attitude towards mathematics, enhancing problem-solving skills, and providing opportunities for deeper engagement with mathematical concepts beyond the traditional classroom. It can also develop leadership, teamwork, and communication skills.
Here's a more detailed look at the educational implications:

1. Increased Interest and Engagement:

- Math clubs provide a fun and engaging environment for students to explore mathematics, making it more appealing and less intimidating according to several sources.
- Activities like games, puzzles, and projects can spark curiosity and a love for mathematics.
- Students can explore mathematical concepts in a practical and creative way, reinforcing classroom learning.

2. Enhanced Problem-Solving Skills:

- Math clubs offer opportunities to tackle challenging problems, encouraging students to think critically and creatively.
- Working together on complex problems fosters collaboration and different problem-solving approaches.
- Students develop resilience and perseverance as they work through difficult problems.

3. Deeper Understanding of Mathematical Concepts:

- Math clubs provide a space for students to discuss mathematical ideas, clarify concepts, and explore applications.
- Activities like math fairs and competitions allow students to apply theoretical knowledge in practical scenarios.
- Students can delve deeper into specific areas of mathematics that interest them, fostering a more profound understanding.

4. Development of Essential Skills:

- Math clubs promote teamwork, leadership, and communication skills as students collaborate on projects and activities.
- Students learn to present their ideas, explain their reasoning, and work effectively with others.
- These skills are transferable to other academic subjects and real-life situations.

5. Positive Impact on Academic Performance:

- By enhancing problem-solving skills and fostering a positive attitude towards mathematics, math clubs can contribute to improved academic performance in the subject.

- Students who participate in math clubs may feel more confident and motivated in their math classes.

6. Complementing Classroom Learning:

- Math clubs provide a valuable supplement to classroom instruction, offering a different perspective and approach to learning.
- Activities in the club can reinforce and deepen students' understanding of concepts taught in class.
- Math clubs can also introduce students to new mathematical ideas and applications that they may not encounter in their regular curriculum.

14. Recommendations

This study was conducted only for30 teachers of primary schools of Pethanaickenpalayam block at Salem District. This study is restricted to primary schools and it may be extended to secondary schools of all blocks in Salem district.

15. Conclusion

Primary school teachers ofPethanaickenpalayam block came to understand the importance of conducting a math club for the primary students. The purpose of this action research was to develop interest on math concepts among the students. It helps the student to create self learning strategy. It also help the students for better understanding of educational concepts and able to link the subject with real life situation.

Bibliography

Annexure -1

Research Tool

Topic: Developing the skill of mathematics through math club among primary teachers.

Name of the M.Mahalakshmi, Lecturer, DIET, Salem.

practitioner:

Research Tool

வ.எண்	விவரம்	(Never)	(Rarely)	(Sometimes)	(Often)	(Always)
1.	கணிதபாடபுத்தகத்தில்உள்ளகணக்குகளை மாணவர்கள்நன்குபுரிந்துகொள்கிறார்கள்.					
2.	கணிதமன்றசெயல்பாடுகளைபள்ளியில்செயல்படுத்திவருகிறேன்.					
3	கணிதவிளையாட்டுகள், கணிதபுதிர்கள்,மாயசதுரம்போன்றவற்றை தீர்ப்பதற்குமாணவர்கள்முயற்சிசெய்கின்றனர்.					
4.	கணிதபாடபுத்தகத்தில்உள்ளகணக்குகளை போலவேபுதியகணிதகணக்குகளைஉருவாக்குவதற்குமாணவர்களைவழிகாட்டிஊக்கப்படுத்துகிறேன்.					
5.	புதியகணக்குகளைஉருவாக்கமாணவர்களைபயண்படுத்தாதற்குகாரணம்,					

	அவர்களால்சொந்தமாகக்கணக்குகளைஉரு வாக்கஇயலாதுஎன்றஎண்ணம்.					
6.	மனக்கணக்குகள், கணிதவிளையாட்டுகள்போன்றவற்றைவகு ப்பறையில்பயன்படுத்தும்பொழுதுமாணவ ர்களிடம்கணிதத்தின்மீதானஆர்வம்அதிகரி க்கிறது.					
7.	மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றைவகுப்பறை யில்பயன்படுத்துவதுமாணவர்களுக்குகவ னச்சிதறலைஏற்படுத்துவதாகஉள்ளது.					
8.	மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றைவகுப்பறை யில்பயன்படுத்துவதுமாணவர்களின்கற்றல் நிலைத்துநிற்கஉதவுகிறது.					
9.	மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றைவகுப்பறை யில்பயண்படுத்தாதற்குகாரணம், மாணவர்களின்மதிப்பெண்குறைந்துவிடும்.					
10	மனக்கணக்குகள்,					

	கணிதவிளையாட்டுகள், கணிதபுதிர்கள்உருவாக்கஅல்லதுசேகரிக்க அல்லதுவிடைகாண்பதற்குமாணவர்களைப யண்படுத்தாதற்குகாரணம், அவர்களுக்குபெற்றோரின்உதவிகிடைப்பதி ல்லை.					
11.	மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றைவிடைகாண ஊக்குவிப்பதுமாணவர்களின்புரிதல்தன் மையைமேம்படுத்துவதாகஉள்ளது.					
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13.	மாணவர்களின்கற்கும்வேகம்குறைவாகஉ ள்ளதால்மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றின்விடைகாண அனுமதிப்பதில்லை.					
14.	பள்ளியில்கணிதமன்றங்களைஉருவாக்குவ துமாணவர்களின்கூட்டுறவுமணப்பாண்மை யைமேம்படுத்தஉதவுகிறது.					

15.	வகுப்பறையில்ஆசிரியர்செயல்பாடுகள்அதிகமாகஉள்ளதால்மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றைஉருவாக்குவதற்கோ,பயன்படுதுவதற்கோஎனக்குபோதியநேரம்இல்லை.					
16.	வகுப்பறையில்கூச்சல்குழப்பம்ஏற்படும்என்பதால்மனக்கணக்குகள், கணிதவிளையாட்டுகள், கணிதபுதிர்கள்போன்றவற்றின்விடைகாண்பதற்குமாணவர்களைஅனுமதிப்பதில்லை.					
17.	மாணவர்களைமனக்கணக்குகள், கணிதவிளையாட்டுகள்போன்றவற்றைதாங்களேஉருவாக்கவோஅல்லதுவேறுபுத்தகத்தில்இருந்துசேகரித்துவருவதற்கோஊக்குவிக்கின்றேன்..					
18.	மாணவர்களேமனக்கணக்குகள்மற்றும்கணிதவிளையாட்டுகளைஉருவாக்குவதுஇயலாதசெயலாகும்.					
19.	மனக்கணக்குகள்மற்றும்புதியகணக்குகளைஉருவாக்கமாணவர்களைஊக்குவிக்கும்பொழுதுகாலவிரயம்ஏற்படுகிறது.					
20.	துவக்கப்பள்ளிமாணவர்களுக்குபாடபுத்தக					

	த்தில்உள்ளகணக்குகளைசெய்வதேபோது மானதாகும்.					

Annexure-2

Photos