

A Study on Quality of Teaching Mathematics in Government Schools of Telangana State at Elementary Level

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ABSTRACT

The aim of this investigation was to study the quality of teaching mathematics in government schools of Telangana at Elementary level. A sample of 64 schools and 64 mathematics teachers were selected from four districts of Telangana for the study. An interview schedule and observational checklist was developed and used for data collection. Results of the study indicated that teachers were successfully able to deal with the subject of mathematics. They had content precision and were able to impart the knowledge on concepts of mathematics for the children. It was also observed that all the teachers were able maintain discipline and good classroom transactions were observed. They were able to manage the blackboard and instructional methods such as explanation, consolidation and evaluation were followed in a sequence. Teachers were also aware of the learning outcomes of children and planned the content in a general to specific manner.

Keywords: *Mathematics, Teacher Competency, Classroom Practices And Teaching Learning*

Elementary education now is a Fundamental Right of all the children of the country. It has become necessary to provide quality elementary education to all the children in the age group of 6-14 years. With a view to translate this concern into reality, successive governments initiated various programmes the most significant being Sarva Shiksha Abhiyan (SSA) launched by the Government of India in 2001 to attain universal elementary education of satisfactory quality by 2010. Ideal class room is a place where the students and teachers can engage in talking, rehearsing ideas, probing judgments, empathizing, listening, and questioning and so on.

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Besides teaching methods, the hidden curriculum that can best be described as the interpersonal exchange activities taking place between the teachers and students, referred to as class room transactions, are undeniably important to devise and design new educational strategies and pedagogical technology. The learning environment is critical to the quality of the higher education experience. Classroom culture and the student-to-student and teacher-to-student transactions that occur within the learning environment play a significant role in student academic performance. Various quality interventions are proposed to create a healthy atmosphere in the targeted schools that caused for the societal participation in the school activities.

The students and the teachers in the classroom primarily exchange information and involve into some observable activities which leads to incidental to learning. The study focuses only on class-room interaction and class-room transactions in mathematics subject because mathematics provides us an unlimited scope to perceive problems under three situations- concrete, abstract and intuition. The important segment of Mathematics- the ability to reason and think clearly- is extremely useful in every aspect of life. Mathematics teachers' knowledge and beliefs; attitude of thinking and decision-making; their practices and development, which contribute to the process of learning and teaching in Mathematics are important indicators of classroom transactions in mathematics class.

METHODOLOGY

The present study is aimed to study the competency level of mathematics teacher at elementary level. Ex-Post facto research design was adopted for conducting this study. Purposive sampling method was used to select the schools to observe the quality of classroom transaction for this study. A total of 64 schools from four districts, (Mahabubnagar, Warangal, Nalgonda, &Ranga Reddy district) 3 mandals were selected from each of the districts for the study

Measurement Tools:

An interview schedule and observational checklist was developed and used to conduct and understand the competency level of mathematics teachers Mathematics teachers. The collected data was coded and interpreted using frequencies and percentages.

RESULTS AND DISCUSSION

1.1 Table on instructional methods in classroom used by teacher

S.No	Statements	Excellent		Very Good		Good		Average		Poor	
		F	%	F	%	F	%	F	%	F	%
1	Teacher had divided content for the year	25	39%	17	27%	18	28%	4	6%	0	0

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2	Teacher was teaching content with clarity	18	28%	28	44%	14	22%	4	6%	0	0
3	Teacher was clear in delivering the concepts	18	28%	26	41%	14	22%	6	9%	0	0
4	Teacher has presentation and explanation skills	19	30%	29	45%	11	17%	5	8%	0	0
5	Teacher consolidates and revise after the class	18	28%	23	36%	20	31%	3	5%	0	0
6	Teacher evaluates homework of children	27	42%	22	34%	10	16%	4	6%	1	2%

From the above table it was observed that most of the mathematics teachers were using appropriate instructional methods while teaching this subject of mathematics to the children. Teachers were regularly giving homework to children and have a check on the children whether they were able to understand the concepts. All most all the teachers were good in their presentation of the topic and explanatory skills. Teachers were teaching subject with clarity and had divided the content across the year for a smooth flow. Majority of them were able to consolidate and revise the concepts and evaluates the children performance by conducting class test.

1.2 Table on Teaching Learning Material/ aids used by teacher in mathematics classroom

S.No	Statements	Excellent		Very Good		Good		Average		Poor	
		F	%	F	%	F	%	F	%	F	%
1	Teacher use the suitable material to deliver the concepts	17	27%	14	22%	21	33%	9	14%	3	5%
2	Teacher uses a variety of teaching aids	5	8%	13	20%	28	44%	13	20%	5	8%
3	Teacher uses teaching aids effectively	4	6%	11	17%	12	19%	25	39%	12	19%
4	Teacher has technical skills in using electronic devices such as operating computer	4	6%	8	13%	14	22%	18	28%	20	31%

From the above table it was revealed that most of the mathematics teachers were using appropriate teaching learning materials while teaching mathematics to the children in the classroom. Most of them were using suitable and appropriate teaching aids in teaching the

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mathematics subject to the children in the classroom. Teacher had poor technical skills in using

S.No	Statements	Excellent		Very Good		Good		Average		Poor	
		F	%	F	%	F	%	F	%	F	%
1	Teacher control and maintains discipline in classroom	26	41%	25	39%	9	14%	3	5%	1	2%
2	Teacher manages time adequately	19	30%	29	45%	14	22%	2	3%	0	0
3	Teacher insists on students attention and participation	20	31%	27	42%	11	17%	6	9%	0	0
4	Teacher interacts and build rapport with children	28	44%	21	33%	11	17%	4	6%	0	0

electronic devices such as computers. Very few teaching aids were observed in the schools.

1.3 Table on teachers classroom management

From the above table it was revealed that most of the teachers were managing their mathematics classes effectively and efficiently having right control over the students in the classrooms. Most of them were adequately disciplining their children during their class hours while teaching mathematics subject.

1.4 Table on Blackboard Management

S.No	Statements	Excellent		Very Good		Good		Average		Poor	
		F	%	F	%	F	%	F	%	F	%
1	Teacher writes clearly on board	35	55%	17	27%	12	19%	0	0	0	0
2	Teacher draws for better understanding	15	23%	29	45%	17	27%	3	5%	0	0
3	Teacher waits for children to copy from the board	28	44%	23	36%	10	16%	3	5%	0	0
4	Teacher wipes off the board after my class	23	36%	23	36%	12	19%	5	8%	1	2%

From the above table it was observed that most of the teachers were effectively and efficiently using the blackboard while teaching the mathematics subject to their students. They draw pictures and illustration to explain the concepts to the children. They also allow the children to solve the problems on board so as to build the confidence in children. All most all the teacher wipes off their boards after completion of their class. Majority of the teachers also provide adequate time for children to copy from the board.

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1.5 Table on Teachers Personal Presentability

S.No	Statements	Excellent		Very Good		Good		Average		Poor	
		F	%	F	%	F	%	F	%	F	%
1	Teacher shows confidence in every activity which is planned	26	41%	23	36%	12	19%	3	5%	0	0
2	Teacher uses expression and gestures for stressing important points	15	23%	32	50%	12	19%	5	8%	0	0
3	Teacher talks fluently with children	25	39%	23	36%	16	25%	0	0	0	0
4	Teacher moves around the class while teaching	19	30%	22	34%	14	22%	7	11%	2	3%
5	Teacher maintains a formal dress code	24	38%	22	34%	15	23%	3	5%	0	0

From the above table it was observed that most of the teachers were presenting their subjects with adequate self- confidence and suitable self- expressions. Teachers were very good in stressing important points to children. They were explaining the concept with a language that children are convenient with and were maintain a formal dress code. To observe the needs of the child majority of the teachers were moving around the classroom so as to understand and attend to the individual child needs.

1.6 Table on Teachers questioning skills

S.No	Statements	Most Frequently		Frequently		Sometimes		Less Frequently		Never	
		F	%	F	%	F	%	F	%	F	%
1	Teacher asks questions to see what the students know about the topic	24	38%	24	38%	15	23%	1	2%	0	0
2	Teacher encourage student to answer difficult questions by providing cues and rephrasing	20	31%	28	44%	15	23%	1	2%	0	0
3	Teacher repeats answers when necessary so that entire class could hear	23	36%	27	42%	14	22%	0	0	0	0

From the above table it was found that most of the teachers were using their questioning skills while teaching mathematics to their students. Most of these teachers were asking many questions to check the student learning and understanding. Teachers were also drawing the level of

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understanding of concept from children through posing question. They were also encouraging children to answer by providing hints and cues. Majority of the teachers were also repeating the question and answers posed to the children to grab their attention.

1.7 Table on performance level of teachers

S.No	Statements	Most Frequently		Frequently		Sometimes		Less Frequently		Never	
		F	%	F	%	F	%	F	%	F	%
		1	Teacher starts the concept its purpose	23	36%	27	42%	9	14%	5	8%
2	Teacher makes relationship between present and previous concept	6	9%	39	61%	7	11%	5	8%	0	0
3	Teacher summarizes the concept taught in class	14	22%	31	48%	17	27%	1	2%	0	0
4	Teacher is through with subject matter and present information in an organized manner	28	44%	22	34%	10	16%	4	6%	0	0
5	Teacher is enthusiastic while solving the mathematic problems	28	44%	25	39%	4	6%	7	11%	0	0

From the above table it was clear that most of the teachers performed very well in the classrooms as they were using appropriate teaching aids. To bring out the clarity and connectivity of concepts majority of teachers were presenting the previous and present concepts. All most al the teachers were summarizing the concept taught to the children at the end of each session. Majority of the teachers had a great flow in teaching as they plan the concept to be taught to the children in an organized manner. The new pedagogy also determined the academic standard for the children which help the teachers in managing the classroom with at most care. Most of them were teaching the mathematics classes with enthusiasm and interest. The performance of the mathematics teachers was satisfactory as they were offering the mathematics subject with efficiency and favourable attitude.

CONCLUSION

From the results of the study, it was found that the quality of teaching practices of the teachers while teaching mathematics subject were effective and efficient in the classrooms. The teachers were using adequate teaching learning material to deliver the concepts to the children. They were also able to manage the classroom discipline and encourage students participation in the classroom. Majority of the teachers were also able to manage the classrooms in a effective way as they are bringing out the connection between the previous concepts which will help the

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children to understand better and give them a clarity on the same. The overall performance of teachers with the subject of mathematics was satisfactory and were able to deliver the concepts in an organized manner.

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