The Primary Teacher

About the Journal

The Primary Teacher is a quarterly journal brought out by the National Council of Educational Research and Training (NCERT), New Delhi. The journal carries articles and researches on educational policies and practices, and values material that is useful for practitioners in contemporary times. The journal also provides a forum to teachers to share their experiences and concerns about the schooling processes, curriculum textbooks, teaching-learning and assessment practices. The papers for publication are selected on the basis of comments from two referees. The views expressed by individual authors are their own and do not necessarily reflect the policies of the NCERT, or the views of the editor.

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CHILDREN'S BILL OF RIGHTS

A child is every person under the age of 18 years. Parents have the primary responsibility for the upbringing and development of the child. The State shall respect and ensure the rights of the child.

Dignity and Expression

- I have the right to know about my Rights. *(Article 42)*
- I have rights being a child and no matter who I am where I live, what my parents do, what language I speak, what religion I follow, whether I am a boy or a girl, what culture I belong to, whether I am disabled, whether I am rich or poor. I should not be treated unfairly on any basis. Everyone has the responsibility to know this. *(Article 2)*
- I have the Right to express my views freely which should be taken seriously, and everyone has the Responsibility to listen to others. *(Article 12,13)*
- I have the Right to make mistakes, and everyone has the Responsibility to accept we can learn from our mistakes. *(Article 28)*
- I have the Right to be included whatever my abilities, and everyone has the Responsibility to respect others for their differences. *(Article 23)*

Development

- I have the Right to a good education, and everyone has the Responsibility to encourage all children to go to school. *(Article 23, 28, 29)*
- I have the Right to good health care, and everyone has the Responsibility to help others get basic health care and safe water. *(Article 24)*
- I have the Right to be well fed, and everyone has the Responsibility to prevent people from starving. *(Article 24)*
- I have the Right to a clean environment, and everyone has the Responsibility not to pollute it. *(Article 29)*
- I have the Right to play and rest. *(Article 31)*

Care and Protection

- I have the Right to be loved and protected from harm and abuse, and everyone has the Responsibility to love and care for others. *(Article 19)*
- I have the Right to a family and a safe and comfortable home, and everyone has the Responsibility to make sure all children have a family and home. *(Article 9,27)*
- I have the Right to be proud of my heritage and beliefs, and everyone has the Responsibility to respect the culture and belief of others. *(Article 29,30)*
- I have the Right to live without violence (verbal, physical, emotional), and everyone has the Responsibility not to be violent to others. *(Article 28,37)*
- I have the Right to be protected from economic exploitation and sexual exploitation, and everyone has the Responsibility to ensure that no child is forced to work and is given a free and secure environment. *(Article 32,34)*
- I have the Right to protection from any kind of exploitation and everyone has the Responsibility to ensure that I am not being subjected to be taken advantage in any manner. *(Article 36)*

IN ALL ACTION CONCERNING CHILDREN, THE BEST INTERESTS OF THE CHILD SHALL BE A PRIMARY CONSIDERATION

All these rights and responsibilities are enshrined in the United Nations Convention on the Rights of the Child, 1989. It contains all the rights which children have all over the world. The Government of India signed this document in 1992.

EDITORIAL

No task is as challenging as organsing a child's day in school. It not only includes visible factors of teacher and textbook but involves a complex interplay of other factors, such as teachers, teaching material, school infrastructure, educational policy, and so on. This issue of *The Primary Teacher* focuses on contemporary issues in elementary education in the light of these factors.

The first paper on 'Teacher Perceptions on Issues of Multigrade Teaching' by Sandhya Sangai and Megha Chowdhary views multigrade teaching as a pedagogic tool that can assist in context of teacher shortage, budget constraints, etc. It tries to explore the perception of head teachers towards multigrade teaching in classroom setting.

The second article 'Error Analysis in Basic Mathematical Operations' by Payel Banerjee and Ujjala Singh examines the mathematical achievement tool. This paper analyses data collected through purposive sampling on 40 elementary students studying in Class VIII government school of Bilaspur, Chhattisgarh. The primary objective of the study is to understand the basic errors committed by students in mathematics at the elementary level.

The third article titled 'Is Homework Necessary?' by K. V. Sridevi and Pooja Tomar analyses the significance of homework in the lives of students, parents and teachers. The findings of the paper indicate that a sizeable number of participants from the above target groups, i.e., students, parents and teachers, was of the opinion that homework is an essential component of the teaching–learning process. However, the researchers conclude that it needs to be engaging, interesting and meaningful so that it contributes to continuous learning of children.

The next paper by Jyoti Pandey tries to explore the attitude of primary teachers towards the Mid Day Meal Scheme. The findings of the study reveal that though the scheme has led to an increase in the enrolment, attendance and retention rate of children in primary schools, teachers are burdened by an added responsibility of overseeing the implementation of the Mid Day Meal Scheme in the schools, which adversely affects the teaching–learning process.

The fifth paper titled '*Shishu Shiksha Karmasuchi* for Quality Primary Education — An Analysis' by Subhasish Khanda discusses that Universalisation of Elementary Education (UEE) has been one of the most important objectives of India ever since Independence. The *Shishu Shiksha Karmasuchi* was introduced by the West Bengal government in 1997 as an alternate

elementary education system to reach out to maximum number of children in the remotest parts of the State. The author discusses various issues and challenges faced by school personnel to implement this scheme at the primary level.

In the paper titled 'English Teaching in Rural Government Schools of Karnataka — A Longitudinal Study', the author K. Vaijayanti takes up a case study in the State, where *Swalpa* English, *Thumba* Fun (SETF), meaning A Little English, A Lot of Fun — an English support programme for Classes I to IV — was initiated. The author elaborates on the programme and addresses various problems that hinder the teaching–learning process and how SETF has helped address the issue.

The paper titled 'Peer Coaching — Live Classroom In-service Teachers' Training Programme' by Ashutosh Anand describes the advantages of in-service teachers' training programme. The author, in this paper, highlights ambiguity in the traditional teacher training programme and emphasises on peer coaching pattern, which is inclusive of the main beneficiaries, i.e, students, who are kept out of the training design in traditional teacher training programme.

The issue also carries its regular features — 'Book Review', 'Did You Know' and 'My Page'. In the Book Review of *Dictionary of History for Schools (Trilingual),* Seema Ojha throws an insight into how the dictionary provides an explanation of various terms and concepts on specific themes that can be useful for both students and teachers. It describes diverse facets of India's historical developments. Furthermore, it serves to introduce children at the primary stage itself that there can be subject-specific dictionaries.

'Did You Know' talks about the Early Childhood Care and Education (ECCE) programme. The article 'Resource Package for Awareness in Early Childhood Care and Education' by Reetu Chandra discusses the ECCE programme, its evolution, implementation, practices and significance. It also elaborates on the resource package for awareness in ECCE developed by the Department of Elementary Education, NCERT. The ECCE lays the foundation to primary education.

'My Page' by Varada Nikalje narrates how a seemingly small incident can bring one face-to-face with temptation, and thus, make one re-examine one's own moral compass.

— Academic Editors

1

Teacher Perceptions on Issues of Multigrade Teaching

Sandhya Sangai* and Megha Choudhary**

Abstract

Multigrade teaching refers to teaching different grades in the same classroom setting. It is not unique to India but is common in many developed and developing countries across the world. Sometimes, multigrade teaching is seen as a pedagogic tool that can assist in times of teacher shortage, budget constraints, etc. In many countries, multigrade teaching is practised in schools mostly situated in rural and sparsely populated areas. The provision of education in multigrade schools is limited by a number of challenges, which negatively affect the quality of teaching and learning. Many teachers feel that multigrade teaching is more demanding and complex than mono-grade teaching. Teachers, teaching in these schools, have only been trained in mono-grade pedagogy, and therefore, lack the knowledge and skills to effectively deal with multigrade classes. In order to improve the quality of education in multigrade schools, teachers need to be imparted training in multigrade teaching.

INTRODUCTION

Multigrade teaching has both demographic and educational relevance. It plays an important role in sparsely populated areas, which are relatively inaccessible having difficult population contexts. The stage of primary education is a period when a child forms and strengthens one's self-concept, which is influenced by the learning environment of the school, as well as, learners' participation. Here comes in the role of teachers.

Multigrade teaching is a challenge. It requires commitment, ingenuity and effort on the part of teachers working in multigrade schools. The success indicators could be comprehensive coverage of children in class and increase in their achievement level.

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Multigrade teaching is more challenging in single–teacher schools. Research and experimentation on multigrade teaching have yielded the relevance of adopting restructured approach in curriculum transaction, preparation and use of substantial variety of self-learning material, and creation of learner friendly school environment.

This article is based on a research study conducted to explore issues related to teaching–learning in 20 multigrade schools in Jaipur district of Rajasthan. Head teachers and in-charge head teachers from the selected 20 schools participated in the study.

CONCEPT OF MULTIGRADE TEACHING

Multigrade teaching in developing countries like India is common. Sometimes, the number of children in each class of a school is quite low. As per the Right To Education (RTE) Act 2009, the teacher–pupil ratio at the primary level should be 1:30. If the total enrolment in a school is 60, only two teachers will be provided, which means each class will get one dedicated teacher. Usually, the posting of teachers is done on the basis of teacher–pupil ratio as per the State rules. In multigrade contexts, pupils of several grades together add up to the normal class size. Combining children of some grades with a teacher to make a possible class size leads to multigrade teaching.

Multigrade contexts vary in various countries across the world.

In some countries like Nepal, one teacher teaches children of more than one grade together, may be in same or different classrooms. In Malaysia, too, a single teacher accommodates children of two or more levels in one classroom. In Pakistan, children of more than three levels are combined and taught by a single teacher (Birch and Lally, 1995). In India, too, multigrade situations are faced by almost all teachers, especially, in government-run primary schools. Even in schools that are otherwise mono-grade, teachers are faced with multigrade situations for various reasons.

PROBLEMS FACED BY TEACHERS IN MULTIGRADE CLASSROOMS

The research tools were developed after an extensive study of articles related to multigrade teaching in various printed and online journals. The situation within the country helped in contextualising factors explored through the research tools. Though the study explored factors related to infrastructure available in multigrade schools and those influencing teaching–learning activities, this article gives an insight into teachers' opinions on various factors affecting the teaching–learning process in multigrade schools. The factors were organised under three categories.

- Factors related to teaching–learning process
- Factors related to classroom environment and management
- Factors related to children

Factors related to teaching–learning process

Teaching–learning at the primary stage is critical as it develops learning style and curiosity for learning among children. It is the primary years that lay the foundation of learning among children. Therefore, the pedagogy of teaching and learning plays a crucial role during these years. Teaching–learning is a two-way process that includes various steps. In this process, the teachers and students are expected to work towards achieving the learning outcomes, which need to be holistic and integrated. A teacher assesses the learning needs of the students and establishes certain learning objectives. Keeping the objectives in mind, the teacher develops teaching–learning strategies to implement the plan of action, and finally, evaluates the outcomes of the plan. The students throughout the process gain information and knowledge by studying, practising and practically understanding the intended learning outcomes. The nature of this process differs across classrooms, depending on varied experiences of the teachers and students.

The responses of the teachers against some identified and researched issues that may exist in multigrade classrooms have been shown in the following diagrams under the three identified categories as discussed earlier.

The bar graph in Figure 1 shows the problems faced by teachers as regards to teaching–learning in multigrade schools. It can be observed that heavy workload on teachers is the biggest problem in multigrade schools as shared by 90 per cent respondents. They said that excess workload stopped them from devoting enough time to students.
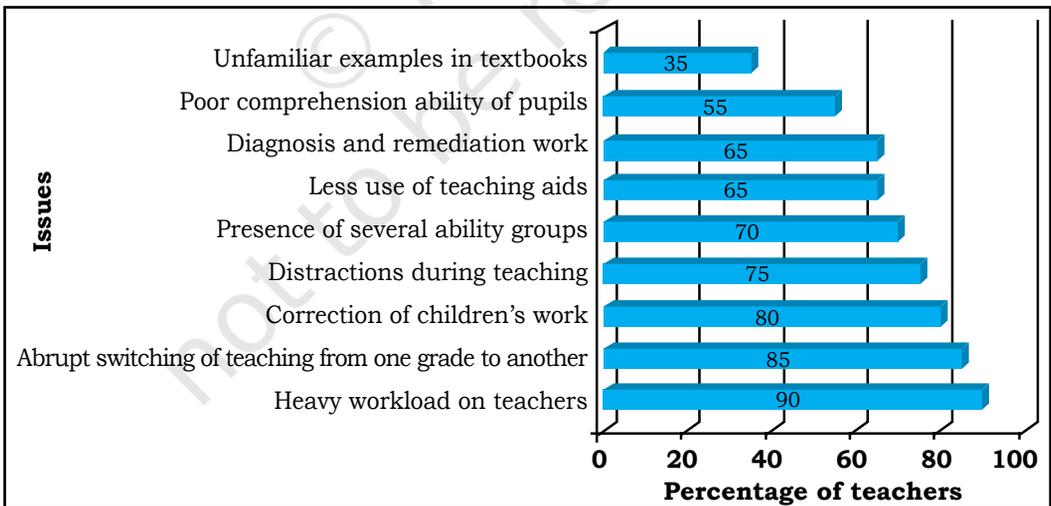

Figure 1: Teaching–learning issues in multigrade classrooms

According to 85 per cent teachers, abrupt switching of teaching from one grade to another was also a persistent problem in multigrade schools. Regular correction of work done by children from various grades and providing them with feedback daily in the same classroom setting was another major problem as shared by 80 per cent teachers. This hampers the process of diagnosis of the problems as faced by many children and finding a solution to these as informed by 65 per cent teachers.

Seventy-five per cent teachers expressed that interruption and distractions during teaching diverted teachers' attention, which adversely affected the quality of instruction. Sixty-five per cent teachers shared that they were not able to use teaching aids adequately as there were several classes running at the same time and in the same space. Children of other classes also got distracted if teaching aids and other support material were used in class.

Sometimes, teachers continuously teach one grade without apportioning time for other(s). Besides, problems, such as unstructured or vague responses by pupils, their inability to understand questions or topics and unfamiliar examples given in textbooks were reported as significant problems faced by the teachers during the teaching–learning process.

Factors related to classroom environment and management

Classroom environment implies the overall atmosphere of a classroom that has direct or indirect impact on classroom activities and students. This includes appearance of the classroom, physical arrangement of tables and chairs, and other teaching–learning aids, as well as, psychological or emotional aspects, i.e., approach of teachers towards students, welcoming atmosphere for students, print-rich walls of the classroom (consisting of paintings, posters, artwork by children), etc.

It can be observed from Figure 2 that all teachers have reported heavy workload as a major factor adversely affecting the classroom environment. The interaction with the teachers helped the researchers understand their workload. They shared that apart from teaching, teachers in primary schools were also responsible for distributing milk and midday meals to children, and also maintain a daily record of consumption as regards to these schemes (In Rajasthan, in addition to the midday meal scheme, children in primary schools are also given milk in the morning. Milk distribution is a State scheme). The teachers also had to maintain a record of free distribution of uniform and books given to the children. They also had to attend important meetings and training programmes, which implies further increase in workload. All these factors caused disruption in the teaching–learning process. As a result, the message received by parents and community, at large, was that no studies were carried out in government schools.
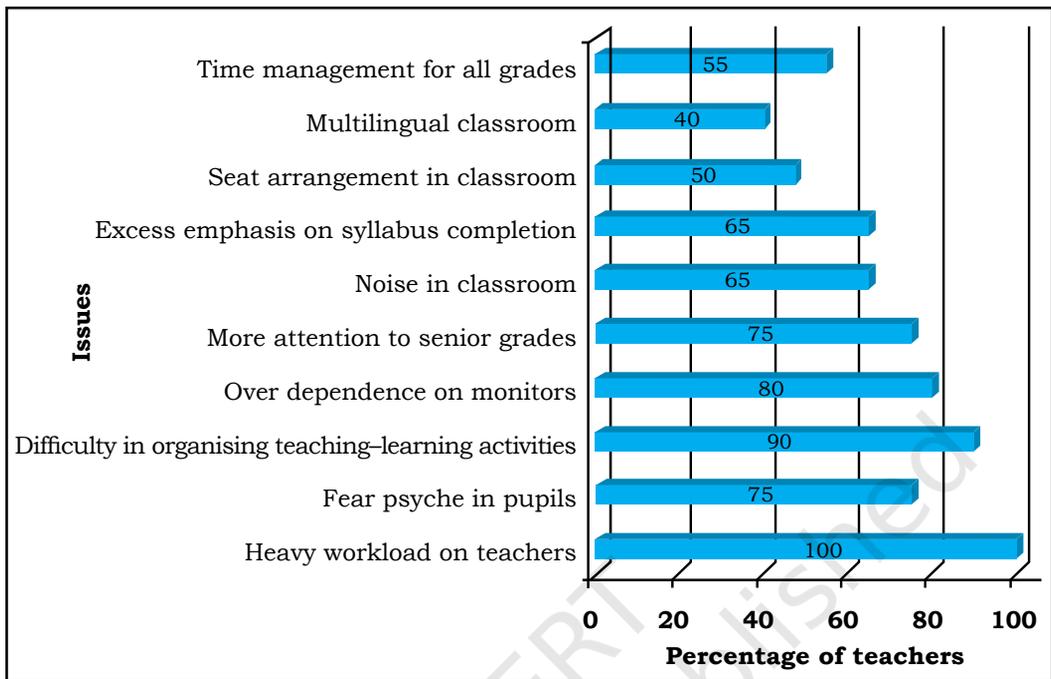
Figure 2: Issues related to classroom environment

According to 90 per cent teachers, another factor that adversely affected the classroom environment was difficulty in organising teaching–learning activities. In primary level classes, activity-based teaching–learning, learning through concrete experiences and learning by doing are considered as important components of pedagogy. Due to shortage of space and time, the teachers were not able to adequately utilise teaching aids in the classrooms.

Eighty per cent teachers said they were immensely dependent on class monitors and 75 per cent shared that they were expected to devote more attention to children of senior classes. Besides these, other factors cited by the teachers that adversely affected the classroom environment were noise in the classroom, fear psyche of the pupils, inadequate and disorderly seating arrangements, presence of pupils speaking different languages in the same classroom and disabilities in some children. Pressure for completing the syllabus without ensuring if it is being grasped by the children was also cited as a major factor adversely affecting the classroom environment and teaching–learning process.

Factors related to children

The researchers, with the help of the teachers, also tried to identify factors related to children that hampered the

teaching–learning process. Though all factors — whether related to teaching–learning or classroom environment — affected the teaching–learning process and performance of children, yet there were certain factors, which affected them directly. These factors, as per the responses of teachers, have been depicted in Figure 3.

The most important factor affecting children directly is that children of different grades sit together under one roof. It causes distraction. If the teacher takes classes one-by-one, then it is all the more distractive because children of other classes become inattentive, and hence, get restless and start disturbing other students. This was shared by about 90 per cent teachers.

Seventy per cent teachers said that they had inadequate teaching–learning aids and material as compared to the number of children studying in a class. This restricted self-learning and involvement by children. Sixty-five per cent teachers said that children were unable to cope up with the load of learning and studies also got hampered due to lack of communication between parents and teachers.
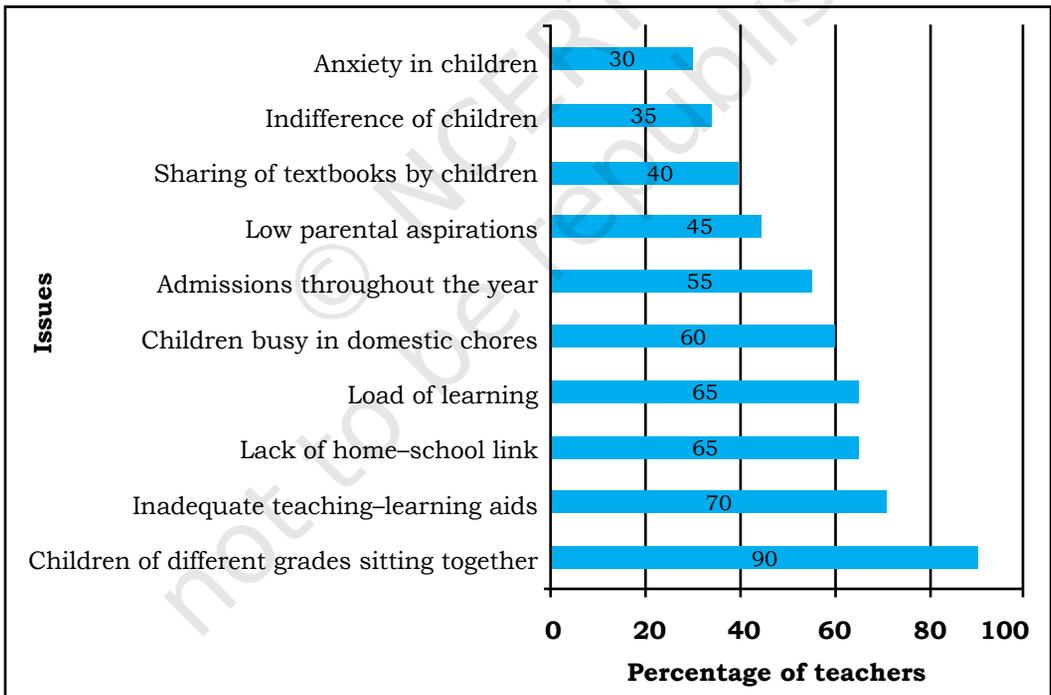

Figure 3: Issues affecting children directly

Sixty per cent teachers viewed that children were, generally, expected to help their parents in day-to-day life at home, including household chores. This distracted them from studies. Low parental aspirations for the future of children was also pointed out as a major issue affecting the studies of children by about 45 per cent teachers.

Fifty-five per cent teachers opined that keeping admissions open throughout the year caused a major problem for existing children in a classroom due to the difference between their and the new students' learning level. This posed a major challenge for the teachers in multigrade schools. Sharing of textbooks by children was also seen a limiting factor, according to 40 per cent teachers. The children were not able to revise the lessons after school and during free time in school hours due to several distractions. The other reasons indicated by the teachers were indifference towards learning, and uncertainty about their future studies and settlement in life.

Conclusion

The multigrade teaching situation as shared by teachers of 20 selected schools in Jaipur district of Rajasthan is disheartening and needs immediate attention of the government and policy makers. Children from poor economic background in rural areas mostly study in multigrade schools.

The teachers shared that they did not get any kind of input for making optimal use of the teaching–learning time in multigrade situations during their pre- or in-service training. Only six out of 20 teachers said they got slight training on handling multigrade classroom situation during their in-service training programme.

Teacher preparation for handling multigrade situations is required on many aspects. It needs to be introduced in the pre-service teacher training curriculum, as well as, in-service teacher education programmes. Teacher trainers must be trained to develop integrated lesson plans for a combination of classes. During internship, student–teachers must be sent to multigrade schools for on-the-job training, which will prepare them to handle multigrade classrooms.

Pupil evaluation like regular primary schools is, generally, not conducted in single–teacher schools in multigrade teaching context due to shortage of time, apart from other factors. Generally, junior classes face neglect for want of teacher's time. Secondly, teachers focus more on scholastic subjects in senior classes. The evaluation policy, procedures and programmes need a review and special design for multigrade context. These need to be based on class-wise learning outcomes — general and subject-wise.

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Error Analysis in Basic Mathematical Operations

Payel Banerjee* and Ujjala Singh**

Abstract

In India, mathematics is taught from the very beginning of schooling and is a compulsory subject up to Class X. The basics of mathematics are taught at the primary level (Classes I to V), which form the base for upper classes. But after the primary level, when students enter the upper primary level, they make many errors while solving basic mathematical problems if their concepts are not clear. Therefore, it is important to know the kind of errors, generally, committed by elementary level students. It is only then that they can be taught accordingly and chances of errors can be minimised. To find out the kind of errors, generally, committed by students, the researchers developed a mathematical achievement tool and administered it on 40 students studying in Class VIII at a government school in Bilaspur, Chhattisgarh. The researchers used purposive sampling technique to carry out the study. The collected data were analysed qualitatively. The result showed that primary level students make many errors while solving basic mathematical problems.

BACKGROUND OF THE STUDY

In the beginning of schooling, the main focus is laid on learning a language, basic calculation and basic science. Language, mathematics and science are used in every aspect of our daily life. Mathematics, also known as 'the philosophy of life' (Yaratan and Kasapoğlu, 2012), is as necessary as literacy (Sumirattana, Makanong and Thipkong, 2017). Mathematics is one of the main subjects up to Class X. At the very basic level, it is taught through concrete objects, pictures and

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images. After that, abstract calculation starts. As it is a subject that requires thinking and reasoning, students learn to solve problems by employing various approaches and formula.

KNOWLEDGE OF MATHEMATICS

Mathematics helps in planning and solving problems in our day-to-day life (Phonapichat, Wongwanich and Sujiva, 2014). Therefore, it holds an important place in the school curriculum. Reading and thinking are the key factors involved in solving a mathematical problem. In order to solve a mathematical problem, the students need to acquire reading skills like reading comprehension and analysing the text, which help them to interpret the text and keywords used in a problem (Phonapichat and Wongwanich, 2014)

LITERATURE REVIEW

Many researches have been carried out in areas of mathematical difficulties faced by students, errors committed by them and their achievement. Suydam and Weaver (1977), and West (1977) found the difficulties that, generally, arose while solving mathematical problems. They concluded that the biggest obstacles in problem solving were due to lack of reading, computational and mathematical skills. Phonapichat, Wongwanich and Sujiva (2014) concluded that:

- students faced difficulty in understanding keywords used in problems, and were hence,

unable to interpret them into a mathematical sentence.

- the students were unable to figure out what to assume and what information from the problem was necessary to solve it.

- when the students were unable to understand a problem, they solved it by guessing without applying any logical reasoning.

- the students became impatient at the time of solving mathematical problems.

Sarwadi and Shahrill (2014) found dislocation of decimal to be a major problem among students. Walker, Zhang and Surber (2008) found that reading difficulties have a significant impact on students with low mathematical achievement. In this regard, Helwing, et al. (1999) concluded reading skill to be helpful in understanding text-based mathematical problems.

RATIONALE OF THE STUDY

As already mentioned, mathematics is an inseparable part of our daily life. However, it must be understood by both teachers and students that mathematical problems involve much more than just placing digits for calculation. Making mathematical mistakes is common. It is a teacher's job to identify the common errors committed by students and try to eliminate or minimise their occurrence. Therefore, identification of errors, generally, committed by students

in the early years of the elementary level is important for ensuring quality learning. Attention must be paid while teaching basic mathematical concepts to students. If there is a gap in understanding the concepts, then the students may continue to face the problems throughout their lives.

This paper tries to find out some common errors committed by elementary level students while solving mathematical problems. It also aims to help teachers identify areas that many students find difficult to understand. The study has been conducted to find answers to the following research question.

Research question

What are the kind of errors, generally, committed by elementary level students while solving basic mathematical problems?

Research objectives

- To find out the errors committed by elementary level students in doing simple mathematical operations
- To find out the errors committed by elementary level students in the interpretation of mathematical problems

Methodology

Method

Qualitative research paradigm has been used to analyse the collected data.

Sample

Forty students studying in Class VIII in different government schools of Bilaspur district, Chhattisgarh, were selected for the study. Purposive sampling technique was used to conduct the study.

Tool

For the collection of data, the researchers developed a questionnaire, comprising questions requiring basic mathematical operations. This questionnaire was used for taking the mathematical achievement test of 40 Class VIII government school students in Bilaspur, Chhattisgarh.

ANALYSIS AND INTERPRETATION OF DATA

Objective 1

To find out the common errors committed by elementary level students while doing basic mathematical operations

Addition

Question 1

Simple addition problem was given to the students to solve. All students, except one, solved it correctly. Figure 1 shows the error committed by the student.
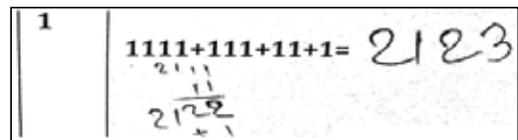

Figure 1: Error committed in solving simple addition problem

Here, the student made an error in writing the digits, placing them, and therefore, did incorrect addition. The student tried to arrange the digits. But in the first line, the student wrote 2 instead of 1, and then, did not add the second number, i.e., 111 and directly wrote 11. Therefore, due to mistake in writing in the first line, the result was wrong and it continued till the end, thereby, giving an incorrect answer. Such an error occurs if the student does not know how to place digits for calculation.

Question 2

In the next question, the students were given to solve a simple addition problem with a decimal. Maximum students (30) made errors in solving it correctly. Only six solved it correctly and the remaining four were unable to solve the problem at all. Figure 2 shows the error that most students committed while solving this question. It can be seen that the students committed an error in putting a decimal. The students did not know that the meaning of 79 is 79.00. So, they put 79 just below the second and third place after decimal, and simply

Figure 2: Error committed in solving addition problem with a decimal

did addition. Due to the wrong placement of 79, the whole process went wrong and the result was incorrect.

Another error found in the same problem is shown in Figure 3. Here, the students added the numbers without using a decimal point. From the analysis of Questions 1 and 2, it is observed that many students made errors in solving addition problem because of wrong placement of digits with or without a decimal.

Figure 3: Error in solving addition problem with a decimal

Question 3

Students also make mistakes when the digits were arranged as in Figure 4. In this particular example, a student simply ignored the third number,

Figure 4: Error in solving addition problem when the digits are arranged correctly

i.e., 70 while calculating the value of addition of three given numbers. Similar errors were observed in the calculations done by many students. This kind of error might have occurred due to carelessness at the time of problem solving or due to limited concept of addition of three numbers having different place values.

Question 4

Here, the students were given an addition problem with a decimal. The digits were placed appropriately. Twenty-four students solved the question correctly and the remaining did it wrongly.

Figure 5: Error in solving addition problem with a decimal when the digits are appropriately arranged

In Figure 5, a student added the digits correctly but missed putting the decimal. It may be because of lack of concentration or carelessness. It may also be because the student lacked an understanding of the place value of decimal. This argument is strengthened with similar incorrect answers by other students like in Figure 6. Figure 6 shows error in counting, as well as, the placement of decimal.

Figure 6: Error in solving addition problem with a decimal when the digits are appropriately arranged

Subtraction

Question 5

In subtraction problems, too, most students committed errors. A simple subtraction problem as shown in Question 5 was given to the students. Only 15 were able to solve it correctly, while the remaining 25 did it wrongly. The errors committed by the students in this problem are shown in Figure 7 and 8.

Figure 7

Figure 8

Figure 7 and 8: Errors in solving simple subtraction problem

Figure 7 and 8 show that the students did not know how to do subtraction. Lack of instruction may be one of the causes behind such errors.

Question 6

When they were asked to solve a subtraction problem with a decimal, the following errors were found. In Figure 9, 10 and 11, the students added the digits instead of subtracting.
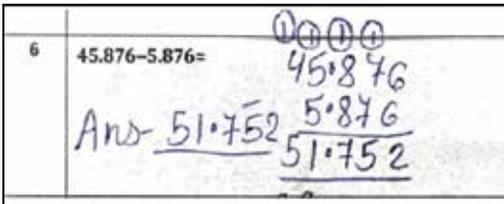
Figure 9
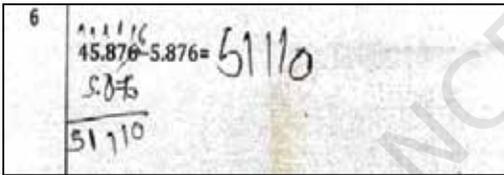
Figure 10

Figure 11
Figure 9, 10 and 11: Errors in solving subtraction problem with decimal

Question 7

Figure 12, 13 and 14 show some of the responses of students to a subtraction problem as regards to whole numbers. In all cases, it is errors in calculation. A deeper inspection reveals that the results were wrong due to limited understanding in 'borrowing

of numbers', and of course, inability to recall steps of operation.

In Figure 12, many students did subtraction of whole numbers, i.e., numbers without decimal. But the result was wrong. Figure 14 shows that a student perhaps read 9000 as 900, which depicts problem with attention and working memory, and rounded off 99 as 100, diluting the preciseness of mathematical operation. From Figure 13 and 14, it can be concluded that the students made mistakes in calculating. However, they knew how to do subtraction.

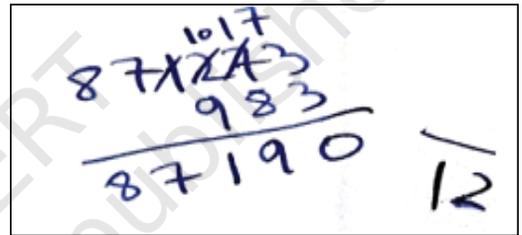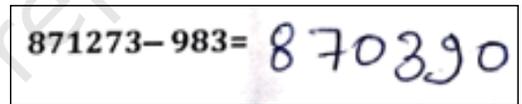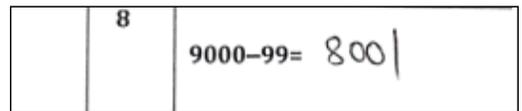*Figure 12*

Figure 13

Figure 14
Figure 12, 13 and 14: Calculation error in solving subtraction problem

Question 8

In Figure 15, another student correctly borrowed numbers for subtraction of a bigger number from 0 and solved it correctly up to three places. However,

at the fourth place, the value borrowed was missed, and hence, the result was incorrect. The student did not even notice that the subtraction value was higher than the positive numbers involved in the process. Apart from carelessness, it also shows lack of sustained attention to allow the working memory to follow correct steps of action for certain duration.

Figure 15: Calculation error in solving subtraction problem without decimal

Multiplication

Question 9

In multiplication, maximum students did not know the rules of multiplying. A total of 29 out of 40 students wrote the same digits (Figure 16) only instead of zero (0). This may be due to lack of clear instruction.

Figure 16: Error in solving multiplication problem

Question 10

Many students committed errors in multiplying digits with a decimal.

Figure 17: Error in solving multiplication problem with decimal

In Figure 17, many students committed an error in the table of 7. This can be seen in the first line itself. Here, the answer of one student indicates that the child started correctly for ones and tens but did not carry over the remaining for the digit placed in hundreds and wrote 21 (i.e., 7 muliplied by 3), and then, the table of 7 is not correctly done for the remaining digits.

In the second line, the student made a mistake in multiplication with zero. Here, the student, started correctly from the right side but after multiplying the three digits, error was made in multiplying the remaining digits with 0. Further, the student also did not complete the multiplication. The child, then, added them and gave the final result of the problem. It is also clear that the student had no idea of decimal placement. When the student was asked to multiply, the child responded of not being able to solve multiplication problems correctly due to mathematics phobia. The child admitted to running away from the subject. Such kind of result may be due to difficulty or inability in recalling

or remembering and practising. Hence, it can be concluded that the students need to memorise the tables first so that they are able to solve multiplication problems correctly.

Question 11

Figure 18(a) shows another example of multiplication. Here, one student multiplied the digits on the right side of decimal but wrote the left side digits in the first line.

Figure 18(a): Error in solving multiplication problem

In the next section, too, one student multiplied correctly (digits from the right side of the decimal) but wrote the same digits (left side of the decimal). The student, then, found the solution by adding the above two lines. At last, the student put the decimal in the wrong place. This is because of lack of knowledge and understanding of the concept of multiplication.

Figure 18(b): Error in solving multiplication problem

Figure 18(b) also shows error in the same problem of multiplication by another student. In the first line of the solution, it is evident that the student does not know the table of 4. This can be seen in the starting (multiplication of 6 with 4). As a result, the further multiplication went wrong. Same kind of error is made in the next line as well. Such errors occur due to inability to memorise and remember tables.

Division

Question 12

In Figure 19 and 20, the students made a mistake in subtracting in a division problem, which is seen in the first line itself. It is also found that two

Figure 19

Figure 20
Figure 19 and 20: Errors done in solving division problem

students were unable to find out the divisible number, which is proven from the last line of the solution as shown in Figure 19.

In Figure 21, two students did an error in subtraction, which is an important step in division. This can be seen in the first line of the solution, i.e., 78 is subtracted from 98, and instead of writing 20, only 2 is written and the next number is brought down from above and a 0 is put next to it. Another error found here is in the placement of decimal. The decimal is placed in the wrong place. This example also shows lack of understanding. While solving a division problem, a zero comes only when the remainder is indivisible and only after that a decimal is required in the quotient. We can say that the student does not understand the concept of division.
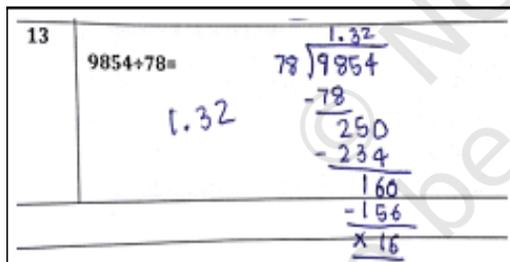
Figure 21 Third example of error in solving division problem

Question 13

In Figure 22, 28 students committed an error in subtraction. It is a frequent error made by students at the time of solving a division problem. This may be because the concept of division is not clear and also due to carelessness at the time of problem solving.
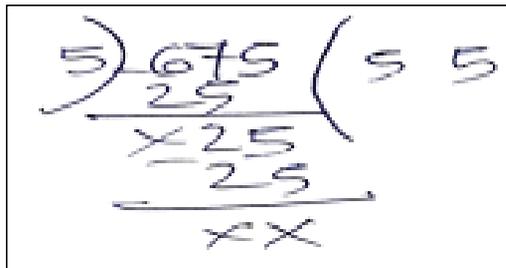
Figure 22: Error in solving division problem

Objective 2

In case of word problems, errors are found not only in the process of solving the problems but also in the statement of reporting the solution or result.

In the first question, it was given that Anamika has 57 mangoes. Her sister Alisha gives her some more mangoes. Now, Anamika has a total 108 mangoes. Find out how many mangoes did Alisha give Anamika?
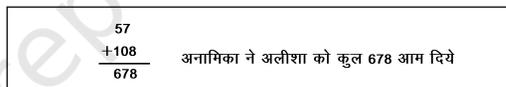
Figure 23
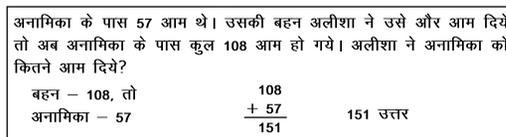
Figure 24

Figure 23 and 24: Errors in solving addition (word) problem

Fifteen students attempted to answer the word problem on subtraction. But as shown in Figure 23 and 24, the students did addition instead of subtraction. Also, one can note from both the cases, the written statement of the problem as proposed

by the student (Figure 24) or report of the solution (Figure 23), the meaning conveyed goes opposite to that of the problem. The evidences indicate that errors in mathematics are not only due to lack of understanding of the calculation process but also due to limited ability to interpret the statement of word problems.

Figure 25

Figure 26

Figure 25 and 26: Errors committed by students while solving word problems of subtraction

In the second question, it was stated that Sushma has 29 flowers. Of these, six are red, eight are pink and the rest are yellow. How many yellow flowers does she have?

Twenty-three students added up all the flowers. Their addition was correct but it was not applicable here (Figure 25). Two students did multiplication as shown in Figure 26.

Eleven students used the correct process but they made a mistake in calculation. Only four students solved the problem correctly. The students, who made mistakes, did not read the problem carefully, and hence, were unable to understand and solve it correctly.

In the third question, it was asked that Sujata has 105 sweets. She has

to distribute it among three sections of Class IX. Figure 27, 28, 29, 30 and 31 show the errors made in solving word problems of division by students.

Figure 27

Figure 28

Figure 29

Figure 30

Figure 31

Figure 27, 28, 29, 30 and 31: Errors committed by students in solving word problems of division

Five students solved the problem by subtracting 9 from 105 (Figure 27), 11 multiplied 105 and 9 (Figure 28) and 18 divided 105 by 9 (Figure 29). One student subtracted 9 from 105

(Figure 30) and the remaining five divided 105 by 3, but there were errors in the division (Figure 31).

From the analysis of the responses of the students and the corresponding figures, it can be said that they were unable to understand mathematical problems in statement form.

In the last question, they were asked that Ramesh has 46 packets of chocolates and each packet contains 14 chocolates. How many chocolates does Ramesh have? In this question, instead of multiplying 46 with 14, 25 students did addition, four divided 46 by 14 and two subtracted 46 from 14. Figure 32 and 33 show the errors made in solving the problem.

Figure 32

Figure 33
Figure 32 and 33: Errors in solving word problem of multiplication

DISCUSSION

It is found that students commit many errors in solving basic mathematical problems. Some of the common errors they make are as follows.

Unable to calculate

As many students are unable to calculate correctly, there is a need to teach them methods to do calculations.

Errors in the placement of decimal

It has been observed that many students are confused in the placement of decimal. Therefore, there is a need to teach them as regards to the placement and use of decimals in mathematics.

Unaware of subtraction rules

Many students do not know the rules and process of subtraction. Therefore, they must be taught the way to subtract.

Unable to memorise and recall tables

In multiplication and division problems, it has been found that students make mistakes at the time of recalling tables, which is the base for solving such mathematical problems. Therefore, students must be made to memorise the tables in the primary stage itself.

Poor comprehension abilities

Most students fail to understand what is given in the statement of a problem and what has to be found. This is one of the main reasons why most of them failed to solve word problems. None of the students could appropriately describe the problem in their own language. Besides, they could not report their findings in line with the problem posed in the question. However, all attempted the question, without understanding the direction

to attempt the problem and tried to do some 'calculation'. They only calculated the digits. This may be due to lack of clear instruction, practices and guidance by teachers and parents.

IMPLICATIONS AND CONCLUSION

The above observations lead us to certain conclusions regarding the teaching–learning of an abstract subject like mathematics at the elementary level. Fundamental knowledge of mathematics is important to lead a productive independent life. Along with verbal language, numbers, shapes, etc., also form part of symbolic instruments to represent the world around us. Numeracy is one of the compulsory skills required even as under the 3Rs (Reading, Writing and Arithmatic). It is one of those areas, which has been part of the core curriculum and cross-curriculum in many national school curricula like in the UK and Australia. Compulsory mathematics up to the secondary level also bears the same intention in India. Lack of proficiency in skills like basic operations, place value of digits in carrying out mathematical operations, etc., deter the goal of education.

Mathematics is not merely understanding of numeracy. It also involves training of thoughts, and use and understanding of language, apart from numbers. It requires language to frame a concept. Hence, training of mathematics must involve simultaneous training of numeracy, language and thought. It is all the more significant at the elementary level

of schooling as children in that age group, generally, depend on concrete operational thoughts. Confusion among students in the processes of four basic operations — addition, subtraction, multiplication and division — indicate a problem in understanding these basic mathematical concepts.

The study also highlights that traditionally adopted methods of reception learning, copying the problems solved by teachers on the blackboard, lack of continuous practice and assessment with feedback, etc., lead students to disadvantage, which eventually causes fear, disinterest and despair in them.

Teaching–learning of mathematics should not be limited to completing the exercises. Rather it should focus on training of supporting skills of thinking — starting from the basic process of paying and sustaining attention to the more complex ones like concept attainment. This training should start at the basic level. Even in the primary classes, it is necessary to adopt strategies, which give learners a scope to retain attention until they solve the problem. An interactive and enriched environment would be beneficial for the students for rule and mastery learning, and shape their concepts in a broader generalised fashion from the very beginning.

Attention should also be paid to inculcating mathematical values of preciseness and accuracy in the learners so that they learn to identify their mistakes and follow precise methods to solve mathematical problems.

Communication is a strong tool for concept building. The students need to be encouraged to think aloud how they interpret a given problem and how they would solve it. Small group discussions, peer collaborations and appropriate probing strategies can help the students enhance their reading and listening skills, as well as, give them space for self-talk to internalise the knowledge that they have reconstructed.

Lastly, mathematics curriculum goals should not be explicit only about the contents but also state the thinking skills that need to be achieved. It is high time that our school curriculum is visualised in a shape other than just a prescribed list of contents, keeping other necessary dimensions implicit. This will be helpful in ensuring holistic teaching–learning in early years of school education. As knowledge of mathematics is cumulative in nature, only a thoughtful teaching–learning in the early years of school can help the students meaningfully survive in the increasingly complex world of numbers, shape, size and estimation.

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3

Is Homework Necessary?

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Abstract

Homework is a formative assessment mechanism, wherein, teachers, students and parents are constructively involved in the teaching–learning process. It is an integral part of classroom transaction. To find out the opinion of teachers, students and parents on homework, a questionnaire was developed by the researchers. Copies of the questionnaire were distributed among 40 parents, 40 students and 30 teacher–educators. Semi-structured interviews were conducted to add the qualitative data obtained. The findings of the study reveal that all stakeholders unanimously concur that homework is an essential component of the teaching–learning process. It was also observed that homework need not only be engaging, interesting and meaningful, involving continuous learning, but also provide a reflective practice to students.

INTRODUCTION

Human beings learn throughout life. But concepts, values and skills learnt at the primary stage play a major role in a person's life. Primary education is the pillar that shapes a person's future. There are several reasons that make primary education important for children. It is the time when all three stakeholders, i.e., parents, teachers and students collaborate in shaping the students' future.

Parental involvement motivates a child towards learning and strengthens the bond between the child and parent. During the primary classes, homework serves as a link between parents, teachers and the child. Through homework, parents get to know what the child has learnt at school. At home, they help the child revise the lesson learnt at school and make the child understand a concept, if not clear.

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Besides, the student can also assess one's learning while doing homework. Next day, when a teacher goes through the child's homework, the person identifies the gaps in learning, the misconceptions that the child might have formed, and accordingly, gives remarks in the notebook or class dairy, suggesting ways to improve the child's learning and performance. It is these remarks that serve as a communication channel between parents and teachers.

Homework is the most frequently used non-testing technique used by teachers in India. No lesson plan is complete without filling in the homework column. A teacher utilises most of the free periods for correcting students' homeworks. Homework, therefore, not only occupies a prominent place in the professional lives of teachers, it also enjoys an equally important status in the lives of students and parents. "What have you got as homework?" is probably the first thing that a parent in India asks a child on return from school. Moreover, all activities like visiting a relative, deciding the playing hours of children, etc., are planned according to the amount and nature of homework that the child gets at school.

Despite its important place in our education system, homework has often been considered as a burden and many educationists have lobbied against it, especially, at the primary level.

According to several theories, homework is one of the non-testing techniques of assessment, which helps the teacher assess the child's learning growth in a regular and comprehensive manner. Apart from assessing the progress of students, homework also aims to inculcate self-learning, self-discipline, self-assessment and life skills like time management, etc., in them. Assessment may be of learning, for learning and as learning. Homework may be classified under assessment for learning.

Due its continuous and comprehensive nature, homework as assessment for learning is preferred by educationists. However, when it comes to practice, owing to practical reasons like large class size and lack of resources, most teachers prefer paper–pen test for assessing students' learning. Homework is the most prominent among different techniques of assessment used by teachers in India. But the irony is that teachers, despite practising it for such a long time, still seem to be unaware of its actual purposes and the ways it can be utilised as an assessment tool.

To understand these gaps in practice of homework, opinions of students, parents and teacher–educators were collected through a questionnaire and analysed.

WHAT IS HOMEWORK?

Homework is teacher assigned learning experiences that take place both inside and outside the classroom. Homework is an integral part of the education process, which is planned and designed

by the teacher to enhance students' learning and related life skills. It is a means of developing a partnership between home (parents) and school (teachers) that will lead to the overall development of the students.

Cooper, et al. (1989) define homework as a task assigned to students by school teacher(s) that are meant to be carried out during non-school hours.

According to Lyn Corno and Jianzhong Xu (2010), homework creates a situation, where the child must complete the assigned tasks with little initial training and under minimal supervision.

In simple words, homework is the reinforcement of classroom instruction — etiquettes, self-discipline and life skills like organisation and time management — by students at home. In general, homework includes the following tasks.

- Completing anything that could not be completed in class
- Practising, reviewing or revising lessons taught in class
- Preparing for the next class
- Applying classroom learning to create something new or solving new problems

Huntington re-labelled homework as 'extended learning' due to the application of constructing new knowledge by applying skills or knowledge gained in class.

ROLE OF HOMEWORK IN TEACHING–LEARNING PROCESS

The role of homework in the teaching–learning process has always been a topic of debate among academicians, teachers and parents. The positive and negative effects of homework by Cooper, et al. (1989 and 2001) were given separately. Negative impacts came after the analysis of literature review. Cooper, et al. (1989) reviewed 120 studies on homework effects. Homework is described as a practice full of contradictions, where positive and negative coincide, i.e., the findings include both positive and negative effects of homework.

According to them, homework has a positive effect on three aspects of students' learning. First, on immediate learning, which means a student can retain factual knowledge for a longer time, develop critical thinking, form concepts and process the information. The second is on long-term academic front. Homework helps develop study habits and skills in students, improves their attitude towards school and inculcates in them the willingness to learn during leisure time. The third aspect is non-academic, which means development of time management skills, making students inquisitive and independent in problem solving, and developing self-direction and self-discipline in them.

According to Cooper, et al. (2001), negative effects of homework include loss of interest, physical and emotional fatigue, less time for community

activities and coping with other students. These lead to increased difference between high and low achievers. They further observed that parental involvement is a factor of confusion in instructional techniques.

According to Lyn Corno and Jianzhong Xu (2010), doing homework correctly boosts the confidence of the students. They demonstrate responsibility and become skilled at managing tasks. These positive outcomes enhance the students' subject matter knowledge.

According to Vidya Thirumurthy (2014), everyday activities at home, often replicating school-based activities, indicate narrowing down the gap between school and home in terms of pursuing linguistic and content specific skills.

According to Oxfordshire County Council, regular and planned homework can:

- develop work habits and self-discipline in students.
- develop skills and attitudes, which can further help children improve their educational performance.
- help parents gain an insight into their child's school work.
- provide opportunities to students to do individual works.
- assist in preparation for future class work.
- provide a context for pupil–parent interaction.

From literature review, it is observed that homework has a lot of positive impact on students' learning, skill attainment and development of life skills like time management, self-discipline and self-awareness. It also leads to motivation and development of positive attitude in students towards learning. Most importantly, homework binds parents, teachers and students together. Parental involvement motivates children to learn and leads to their emotional development.

FACTORS AFFECTING THE UTILITY OF HOMEWORK

There may be a gap between what the policy intended and what is actually implemented in the classroom. This is, particularly, true for homework. One of the reasons why teachers often fail to utilise homework effectively could be because it involves complex interaction of comparatively more number of factors than any other instructional strategy practised by them.

Individual differences among students

It plays a major role. The effects of individual differences are predominant in the primary classes as the students are too young to get comfortable with their specific weaknesses.

Home environment and economic condition

The environment at a child's home and the family's economic condition may also affect the child's studies, especially, the homework time.

Community services

These are prevalent in some communities, which may compete with a student's homework time.

Student age, interest, motivation and cognitive level

These must be taken care of by the teachers while assigning homework.

Parental involvement

In the primary classes, homework is significant, which depends on parents' qualification, time availability and interest in their child's education.

WHY HOMEWORK?

Homework is a formative assessment technique, which is designed keeping in mind the specific learners and learning contexts. Therefore, its objective is to do continuous and comprehensive assessment of the learners, assess their strengths and weaknesses, which help teachers to modify the instructions accordingly.

OBJECTIVES OF THE STUDY

- To collect the opinions of parents and students on present day practices of homework
- To collect the opinions of teacher-educators on homework and take their feedback on ways to improve it
- To suggest methods to make homework a meaningful activity

METHODOLOGY

The present study is descriptive in nature. Survey method was used to collect the data. The sample of the study includes 40 parents (whose children study in Classes IV and V), 40 students of Classes IV and V from Delhi–NCR schools and 30 teacher–educators.

TOOLS DEVELOPED AND USED

A questionnaire, consisting of 10 questions, was developed for collecting the opinions of teacher–educators, students and parents on homework.

Table 1: Importance of homework

For parents	For students	For teachers
• Understanding their child • Strengthening bond with the child • Analysing the child's strengths, weaknesses and interests • Planning for the child's future, after understanding the strengths and weaknesses	• Developing habits like self-discipline and self-learning in students • Learning life skills like introspecting one's own learning (metacognition), time management, etc. • Developing interest towards learning	• Regular assessment of students' learning progress • Analysing gaps in understanding of concepts • Evaluating and improving one's way of giving instructions • Providing immediate feedback to improve students' learning

A semi-structured interview schedule with pointers was developed to add the qualitative data obtained.

ANALYSIS AND INTERPRETATION OF DATA

The researchers administered the questionnaire onto 40 parents, 40 students and 30 teacher–educators to know their opinions. Opinions echoing same views are not repeated. The suggestions of the teacher–educators were also collected to make homework a joyful activity and an effective tool of learning and assessment.

Opinions of parents

Most parents feel that homework is a burden not only on the child but also on them. The nature of homework assigned is mostly such that it is the parents who actually have to do it. Though some parents agreed that homework is necessary, they felt it needs to be made more student oriented. They suggested that homework must be made interesting, creative and less time consuming. Some parents also opined that teachers need to evaluate the students' homework regularly and motivate them by giving a 'star(★)' or similar appreciation rewards.

Analysis of parents' opinions

In general, many parents feel that homework is good for children. They understand its value. Some feel homework must be given as it improves children's understanding and helps them to retain concepts taught in class for a longer time. But many seem to be unhappy with the way home

assignments are given these days. The parents' concerns mainly revolve around the nature of homework and its utility for children. They opine that homework does not lead to the academic and cognitive development of children. It is a monotonous activity and more of a burden on parents, rather than serving as a learning and development tool for children. It was also expressed that children do not value homework as it is not checked and assessed regularly.

Opinions of students

The student's opinions were largely in favour of homework. They liked doing activities, making models, participating in discussions and writing. If they faced problems, it was with aspects like not getting enough time to play, visiting friends and relatives or going out for recreation activities. One student said it was de-motivating if homework was not checked and assessed regularly. A visually impaired child said he wished the teachers would give homework conducive to his condition.

Analysis of students' opinions

In general, students love doing homework. They enjoy it when it is activity based, which means they can do themselves or along with parents or friends. Most of them want to do their homework themselves and do not like when their parents or tuition teachers do it for them. But they do not want homework to leave little or no time for hobbies or recreational activities.

It was observed that homework, sometimes, became a hurdle in community services and did not match the intellectual level of students as they were unable to complete it on their own. The students also wanted appreciation from teachers as they put in a lot of effort in completing their homework. They wished to be informed about their shortcomings, too, so that they could improve upon in those areas.

Opinions of teacher–educators

All teacher–educators agreed on the importance of homework. Some expressed the view that teachers can coordinate and schedule homework among different subjects so that students are not burdened with homework in all subjects on a single day. The homework must be relevant to what the students have learnt in class. Some teachers opined that homework need not be confined to textbook but move beyond and include activities, such as newspaper reading, recording interviews with family members, etc. The teacher–educators opined the following.

- Teachers may structure and monitor homework in many ways or make a concept map, synthesising all points collected from students. The teachers can also use peer assessment technique for this purpose.

- Homework assigned to children needs to be such, which develops their critical thinking ability.

- The purpose of homework is to identify individual learning problems. So, it must not be lengthy or complex.

Analysis of teacher–educators' opinions

Homework must be given, keeping in mind the age and ability of the students. A variety of activities can be given as homework, encouraging parent–children participation. Homework is an important step in the teaching–learning process as it helps teachers and parents to identify the strengths and weaknesses of the students and help them improve.

Suggestions

- Homework need not be given every day in every subject.

- It must be based on the age, maturity and cognitive level of the students.

- Teachers need to ensure variety of activity in homework, which can be used as a follow-up activity. As far as possible, homework must focus on daily life activities.

- The teachers must check the homework done by the students regularly and provide feedback. There can be many ways through which feedback can be given, for example, the feedback for all students can be clubbed together and posted on the classroom wall for the students to observe and correct their own understanding (assessment as

learning). The teacher may also ask the students to read out the answers and give immediate feedback by paraphrasing and summarising the responses.

- Homework that fosters creativity in students, testing their application ability, can be given.

- Teachers of different subjects can coordinate, discuss and give a common homework, which would help test the understanding of the students in various subjects simultaneously. It also leads to a comprehensive assessment of the students.

- Importance is laid on homework in continuous and comprehensive assessment in the progress report.

- Qualitative description of the children's homework for the whole year can be provided in the report cards, which would serve as a motivating factor for both the students and their parents.

- The teachers can be trained in using rubrics to check the students' punctuality not only in attending school but also assessing their progress in completing the assigned homework.

CONCLUSION

Homework is a cost-effective instructional, as well as, an assessment tool. It serves different purposes for teachers, students and parents. Its role varies from grade-to-grade. It is essential at the primary level as it builds a bridge between the teacher, students and parents, and also strengthens their bond. For primary stage students, homework must match their cognitive level and not be time consuming. The students must get sufficient time for pursuing their hobbies and recreational activities. Therefore, it can be concluded that homework is a non-school learning experience that supports the students' learning and development by effectively linking school and home.

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Attitude of Primary Teachers towards Mid Day Meal Scheme

Jyoti Pandey*

Abstract

Cooked midday meal is mandatory to be provided to all children studying in government and government-aided primary and upper primary schools in all States of India. The Mid Day Meal Scheme (MDMS) was initiated on the adage that "when children have to sit with an empty stomach in class, they cannot focus on learning". Children are the future of the country. Education and health are the two basic requirements of children. This study reveals the attitude of primary school teachers about the scheme. A total of 180 upper primary school teachers from Bareilly district of Uttar Pradesh were selected as sample and were given an attitude scale regarding the implementation of MDMS in their respective schools. It was found that the scheme has led to an increase in the enrolment and attendance rate in schools. Besides, it has contributed in retaining the classroom strength. However, it has adversely affected the teaching–learning process in schools as teachers have an additional burden of monitoring the supplies for the preparation of midday meals and overseeing their distribution among the students. Therefore, it is needed to clearly define the roles and responsibilities of teachers in the implementation of MDMS in schools.

Introduction

The Mid Day Meal Scheme (MDMS), one of the largest schoolchildren feeding programmes in India, caters to their nutritional needs. With the objectives to meet the nutritional requirements of school-going children and to increase enrolment, retention and attendance rate in primary and upper primary schools,

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a centrally-sponsored scheme called the National Programme of Nutritional Support to Primary Education (commonly known as the Mid Day Meal Scheme) was launched on 15 August 1995. In an order dated 28 November 2001, the Supreme Court of India directed all States and Union Territories to start providing cooked midday meals in primary schools within six months. The scheme was introduced for students of upper primary classes in government and government-run schools in 2006–07.

REVIEW OF RELATED STUDIES AND LITERATURE

A centrally-sponsored survey was conducted on the 'Future of Mid Day Meals' (2003) in government and government-aided schools in three States — Chhattisgarh, Karnataka and Rajasthan. The aim of the study was to examine the implementation of the scheme and its success in the schools in the three States. Two nutrition related achievements emerged. Firstly, midday meal helped end classroom hunger among students. Secondly, the meal helped reduce child malnutrition in many areas.

The National Institute of Nutrition, Hyderabad, in 2004 studied the impact of midday meal on enrolment, attendance and dropout rate in schools, and its impact on the nutritional status, as well as, academic achievement of students. The results of the study indicated better enrolment ($p < 0.05$) and attendance ($p < 0.001$), higher retention with reduced dropout rate

($p < 0.001$), a marginally higher scholastic performance and marginally higher growth performance of children of schools, where the MDMS was being implemented.

The report of another study conducted jointly by the University of Rajasthan and United Nations International Children's Emergency Fund (UNICEF) in 2005 revealed that introduction of menu-based midday meal had improved the enrolment and attendance rate of students in schools of Rajasthan. The report further revealed that midday meal had also contributed to social equity as children sat together in a common area in the school and shared a common meal irrespective of religion, caste and class.

The National Institute of Public Cooperation and Child Development in 2006 also conducted a study on the impact of midday meal scheme in Karnataka and found that midday meal had improved attendance in majority of government and government-aided schools in the State and reduced absenteeism and dropout rate, especially, in the primary classes.

In another study, Afridi (Syracuse University, March 2007), and Graham and Cherr (2008) concluded that teachers perceived school meals as an effective nutritional tool to promote healthy eating habits in students. They believed that apart from meeting the basic nutritional requirements of school-going children and encouraging healthy eating habits in them, midday meal also helped enhance their academic performance

and physical activity. They found that midday meal attracted students to attend school.

Nambiar, et al. (2010) conducted a study in schools of Baroda district in Gujarat. They found that cooked midday meals being provided to students approximately contained 300 calories and 8–12 grams of protein. They also found that 69 per cent of the parents felt that their children had gained weight because of eating midday meal in schools, while 65 per cent felt that their children suffered less from common ailments as midday meal met their nutrition needs.

According to Chugh (2014), teachers in all sampled schools of Maharashtra reported that the MDMS had considerably increased their workload. Apart from teaching students and managing various classroom activities, they were also responsible for monitoring the purchase of ingredients necessary for preparing midday meal and its distribution among children.

Lalita and Rekhi (2016) studied about nutritional contribution of midday meal as per quality norms in upper primary classes of Delhi schools. They suggested the authorities concerned to increase the amount of fat, green leafy vegetables and fruits rich in vitamin C in the meals.

Teachers and parents opined that midday meal met the nutritional requirements of children and helped them stay fit. They shared that it also improved the enrolment and attendance rate in schools. Many of them demanded that better quality cereals be used in preparing the meals. Besides, fruits and milk should be included in the meal. However, some felt that drinking water and toilet facilities were more important than midday meal.

Lone and Nazim (2017) compared the anthropometric measurements, intellectual and social development of midday meal and non-midday meal beneficiaries in Kulgam district of Jammu and Kashmir. The study concludes that non-midday meal beneficiaries showed better nutritional status in terms of anthropometric measurements compared to those who received midday meals. However, the benefits in terms of intellectual and social development were not evident in children who received midday meals and those who did not.

Kaur (2018) revealed no significant difference in the attitude of teachers about providing midday meal on the basis of gender and locality.

All these parameters need to be further improved upon and strengthened to fill the nutrient gaps to ensure that MDMS has a positive impact on the health and mind of schoolchildren.

STATEMENT OF THE PROBLEM

The study tries to find out the attitude of upper primary school teachers about MDMS being implemented in several government-aided and government schools of Bareilly district in Uttar Pradesh.

OBJECTIVES

- To assess the attitude of upper primary school teachers about MDMS
- To compare the attitude of upper primary school teachers about MDMS on the basis of gender
- To compare the attitude of upper primary school teachers about MDMS on the basis of age group
- To compare the attitude of upper primary school teachers about MDMS on the basis of stream

HYPOTHESES

- There is no significant difference in the attitude of upper primary school teachers about MDMS on the basis of gender.
- There is no significant difference in the attitude of upper primary school teachers about MDMS on the basis of age group.
- There is no significant difference in the attitude of upper primary school teachers about MDMS on the basis of stream.

SAMPLE

A total of 180 upper primary school teachers from 45 government and government-aided schools across 15 blocks in Bareilly district of Uttar Pradesh were selected as sample. Stratified random sampling technique was used to conduct the study. Three schools were selected from each block and four teachers were selected from each school.

The sample has been categorised on the basis of gender, age group and stream. It consists of male (N=98) and female (N=82) teachers. The average age was taken as 35 years. On the basis of age group, the sample teachers were categorised into two groups — above average or senior teachers (more than 35 years) and below average or junior teachers (less than 35 years). Senior teachers (N=85) and junior teachers (N=95) formed the sample. In case of stream-wise division, the sample for science stream teachers is (N=70) and arts (N=110).

PSYCHOMETRIC INSTRUMENT

A self-developed attitude scale was used to collect data from the teachers. The attitude scale consisted of 30 statements, which covered six dimensions, namely role of teachers, teaching–learning process, attendance of students, nutrition of students, conversion cost and execution of MDMS. The reliability of the tool has been measured by test–re-test method, which is 0.75. The validity coefficient of the tool is 0.86. The scale also consisted of face and content validity. The tool contained both positive and negative items for scoring procedure opted (5, 4, 3, 2 and 1 for positive items, and 1, 2, 3, 4 and 5 for negative items).

Table 1: Comparison in the attitude of teachers about MDMS on the basis of gender

S. No.	Dimensions	Male teachers (N=98)		Female teachers (N=82)		t–Ratio
		Mean	S.D.	Mean	S.D.	
1.	Role of teachers	13.08	1.72	12.61	1.82	1.78
2.	Teaching–learning process	20.58	2.30	20.72	2.03	0.42
3.	Attendance of students	15.51	2.49	15.20	2.97	0.77
4.	Nutrition of students	11.43	2.13	11.24	2.39	0.55
5.	Conversion cost	20.87	1.43	21.15	1.42	1.31
6.	Execution of MDMS	16.36	2.73	15.39	2.56	2.44*

Significant at 0.05 level

DATA ANALYSIS AND INTERPRETATION

Data regarding the attitude of male and female teachers about MDMS of the basis of gender is depicted in Table 1. The result reveals that out of the six dimensions, significant difference among male and female teachers is found on one dimension only, i.e., execution of MDMS, for which the t-ratio is 2.44, mean values 16.36 and 15.39, respectively. The corresponding standard deviations for male and female teachers are 2.73 and 2.56, respectively, which implies that both male and female teachers do not have similar attitude regarding the execution of the scheme. Hence, the first hypothesis that there is no significant difference in the attitude of upper primary school teachers about MDMS on the basis of gender is partially accepted and rejected at 0.05 level of significance.

The result of the study is similar to Chugh (2014), who concluded that executing MDMS is difficult for teachers as the scheme had considerably increased their workload. The results of the study also corroborated on the remaining five dimensions with Kaur (2018), who reported no significant difference in the attitude of male and female teachers on MDMS.

Table 2: Comparison in the attitude of teachers about MDMS on the basis of age group

S. No.	Dimensions	Senior teachers (N=85)		Junior teachers (N=95)		t–Ratio
		Mean	S.D.	Mean	S.D.	
1.	Role of teachers	12.91	1.84	12.83	1.73	0.28
2.	Teaching–learning process	20.75	2.25	20.55	2.11	0.63

3.	Attendance of students	15.52	2.62	15.23	2.81	0.70
4.	Nutrition of students	10.87	2.26	11.77	2.17	2.72*
5.	Conversion cost	21.19	1.38	20.82	1.45	1.74
6.	Execution of MDMS	16.09	3.00	15.76	2.37	0.84

Significant at 0.05 level.

Data regarding comparison in attitude between above average age or senior teachers and below average age or junior teachers about MDMS is shown in Table 2. It is analysed that out of the six dimensions, significant difference is found only on one dimension, i.e., nutrition of students, for which the t–ratio is 2.72. The mean values for senior and junior teachers are 10.87 and 11.77, respectively. The corresponding standard deviations are 2.26 and 2.17 for senior and junior teachers, respectively, which reveal the significant difference between them about MDMS. Hence, the second hypothesis that there is no significant difference in the attitude of upper primary school teachers about MDMS on the basis of age group is partially accepted and rejected at 0.05 level of significance.

The result of the study is similar to what Lalita and Rekhi (2016) found in their study conducted in upper primary classes of Delhi government schools. They had said that the quality of midday meals being provided to students in Delhi schools need to be improved by increasing the amount of fat, green leafy vegetables and fruits rich in vitamin C.

Table 3 reveals the attitude of teachers as regards to MDMS on the basis of stream. It shows that no significant difference was found among teachers on the basis of stream.

Table 3: Comparison in the attitude of teachers about MDMS on the basis of stream

S. No.	Dimensions	Science stream teachers (N=70)		Arts stream teachers (N=110)		t–Ratio
		Mean	S.D.	Mean	S.D.	
1.	Role of teachers	13.14	1.91	12.69	1.67	1.67
2.	Teaching–learning process	20.51	2.42	20.73	2.01	0.64
3.	Attendance of students	15.79	2.04	15.10	3.05	1.66
4.	Nutrition of students	11.33	2.31	11.35	2.22	0.08
5.	Conversion cost	20.90	1.43	21.05	1.43	0.71
6.	Execution of MDMS	16.39	2.19	15.62	2.93	1.88

CONCLUSION

From the findings of the study, it can be concluded that significant difference in the attitude of teachers about MDMS was found only on one dimension in case of gender and age group, while no significant difference was found on the basis of stream.

Though the scheme is helping achieve the goals of Universalisation of Elementary Education, it is important that it is implemented in a manner that it does not hinder the teaching–learning process in schools. Teachers must be made free from the additional burden of monitoring the purchase of ingredients required for preparing midday meal and its distribution among children. Besides, problems related to maintenance of records, lack of adequate teaching staff, time management, appropriate transaction of the teaching–learning process and making midday meal arrangements, etc., pose obstacles in fulfilling the objectives of the scheme. Therefore, to implement this scheme in a more effective manner, appropriate arrangements must be made.

Besides, incentives, appreciation and rewards must be given to teaching and non-teaching staff so as to encourage them to carry out midday meal duties without feeling burdened. Time-to-time attention must also be paid to other aspects, such as financial resources, working hours, workforce requirement, etc., for the smooth and effective implementation of the programme. It is important that attention is paid to what Chugh (2014) suggested. She said that it is necessary to define the role and responsibility of teachers in the implementation of MDMS as apart from teaching, they are also responsible for monitoring the purchase of ingredients required for preparing the meal and its distribution, leaving them burdened.

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5

Shishu Shiksha Karmasuchi for Quality Primary Education — An Analysis

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Abstract

Universalisation of Elementary Education (UEE) has been one of the foremost objectives of the Government of India ever since Independence. But all children in the country do not get an opportunity to attend primary school due to various reasons. Besides, many drop out even after having been enrolled to a primary school. In order to rectify this situation and achieve the goal of UEE, the Government of West Bengal in the year 1997–98 planned to set up about 1,000 Child Education Centres with the help of Panchayati Raj bodies. The Department of Panchayat and Rural Development, West Bengal, took up the programme as Shishu Shiksha Karmasuchi and decided to set up Shishu Shiksha Kendras (SSKs) in areas, where at least 20 children did not have access to a primary school or required some special dispensation, which were not available in formal primary schools. Hence, Shishu Shiksha Karmasuchi aimed at mainstreaming out-of-school and other underprivileged children living in the remotest areas of West Bengal. The present study investigates the effectiveness of Shishu Shiksha Karmasuchi towards achieving the goal of UEE and various issues faced in implementing the programme at the primary level. The paper discusses various problems related to primary education and barriers like untrained teachers, irregular and inadequate supply of books and uniform, lack of parental involvement in school activities, and lack of infrastructure for Children With Special Needs (CWSN). All these create a hindrance in achieving the goal of UEE. Descriptive survey design was employed to conduct the study. Head teachers, teachers, academic supervisors, parents and School Management Committee (SMC) members were selected as participants through simple random sampling technique.

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INTRODUCTION

Education is one of the most important factors required for the development of a nation. Ever since Independence, UEE, under which the State aims to provide free and compulsory education to all children in the age group of 6 to 14 years irrespective of caste, creed, sex, religion and place of stay, is one of the foremost objectives of the Government of India. In 1950, the provision of UEE was incorporated in Article 45 of the Constitution, which says: "The State shall endeavour to provide within a period of 10 years from the commencement of the Constitution free and compulsory education for all children until they complete the age of 14 years."

Various commissions were formed and policies were drafted for achieving UEE in India. The Kothari Commission, National Policy on Education (NPE) and National Curriculum Framework (NCF) for school education 2000, to name a few, emphasised on reducing wastage (dropout) and stagnation (child repeating the same class another year) of children in school. The government also launched the Mid Day Meal Scheme (MDMS) on 15 August 1995 to be introduced in all government and government-aided primary schools in order to achieve the goal of UEE. The implementation of MDMS has led to an increase in enrolment, retention and attendance rate of students in primary schools. The Right To Education Act (RTE) 2009, under Article 21A of the Constitution, has made education a Fundamental Right for all children in the age group of 6 to 14 years from 1 April 2010. Right To Education was treated as a joint responsibility of both the State and Centre.

Thus, it has been found that the target group of both SSK and RTE Act is the same as both have the same objectives to achieve.

SHISHU SHIKSHA KARMASUCHI

The aim of the Paschim Banga Rajya Shishu Shiksha Mission (PBRSSM), which works under the West Bengal government's Panchayat and Rural Development Department, is to implement the *Shishu Shiksha Karmasuchi* and *Madhyamik Shiksha Karmasuchi* in rural areas of the State in order to achieve the goal of UEE. Under the *Shishu Shiksha Karmasuchi*, launched by the PBRSSM in the year 1997–98, *Shishu Shiksha Kendras* (for Classes I to IV) were opened to meet the basic education needs of children living in backward and remote areas of the State, who are unable to attend primary school due to various reasons. From 2003, under the *Madhyamik Shiksha Karmasuchi, Madhyamik Shiksha Kendras* (for Classes V to VIII) were opened for children living in remote and backward areas of the State, who were unable to attend upper primary or secondary school.

In the beginning, both the *Shishu Shiksha Karmasuchi* and *Madhyamik Shiksha Karmasuchi* were launched for mainstream out-of-school and other underprivileged children living

in remote areas of the State. However, with time, both the *Shishu Shiksha Karmasuchi* and *Madhyamik Shiksha Karmasuchi* gained popularity, and they now work towards achieving the goal of UEE in the entire State.

STATEMENT OF THE PROBLEM

Various studies have been conducted as regards to the implementation of primary and elementary education programmes in the country. While conducting the present study, the researcher found that a programme similar to the *Sarva Shiksha Abhiyaan* (SSA) named *Shishu Shiksha Mission* (SSM), which comes under the *Shishu Shiksha Karmasuchi*, is being implemented in West Bengal. The objectives of both the programmes are same, i.e., to promote UEE. But it was found that no study on SSM has been conducted so far. Therefore, the researcher has attempted to investigate how the programme is being implemented across West Bengal to achieve quality primary education and how far has it been accessible to children of the State. The researcher has also tried to find out issues that cause a roadblock in the working of SSM to provide quality primary education in the State.

A quality education system must provide people with a comprehensive education programme that enables them to manage daily life activities. In the present study, quality education means the parameters included in the *Shishu Shiksha Karmasuchi* programme of West Bengal.

SIGNIFICANCE OF THE STUDY

All children do not get an opportunity to attend primary school and many drop out in the middle because of various reasons. Therefore, the Government of West Bengal decided to introduce an alternate primary education system, which could reach out to children in the remotest parts of the State. This initiative aims to reach out to maximum number of children and impart primary education to them. The Panchayat and Rural Development Department in the State took up the programme and decided to set up SSKs in all those areas, where there were at least 20 children not having access to primary school or required special dispensation not available in formal primary schools. Initially, the SSKs were run by local untrained teachers. However, later, the teachers teaching in these SSKs were provided with in-service training. Hence, the quality of education provided by SSKs was initially not at par with formal government-run primary schools.

The decade of 1990s would be considered as a turning point in the history of Indian education (Aggarwal, 2001). Many initiatives were taken to provide education to all children in the age group of 6 to 14 years in order to achieve UEE. Aggarwal (2001) conducted a study on progress towards universal access to education and retention of children in schools, ensuring no dropout in primary classes. He pointed out that additional efforts need to be made to improve the quality of education in the country.

Gandhe (2000) says there is a need to raise consciousness among rural people as regards to educating their daughters and eradicating child marriage, which is a stumbling block to girls' education in Rajasthan.

Yadappanavar (2002) examined factors influencing elementary school education. He underlined that poverty; migration of parents; lack of infrastructure like toilets, drinking water facility, playground, classrooms, etc.; parental attitude towards schooling and poor resource planning were responsible for low enrolment rate. He recommended few suggestions to ensure quality education to children.

Kothari (2004) emphasised that the country is far from attaining the goal of UEE due to various factors, such as undernourishment, severe morbidity, physical disability in children, etc. Kothari also opined that school needed to be made more attractive to draw girl students and first generation learners.

Maikhuri (2005) pointed out that all government-run elementary schools in Uttarakhand had no electricity supply and only 40 per cent had toilet facility, which hindered the process of imparting quality education to children in the State.

Acharya and Sarkar (2006) suggested that providing clean drinking water facility in schools and conducting regular health checkups of students were important aspects of school management and parameters for ensuring quality education to children in Odisha.

Mishra (2007) revealed that 92 per cent of primary schools in Angul district of Odisha did not have sufficient furniture.

Jena (2009) pointed out inadequate space for learning, lack of playground and play material, lack of sanitary conditions, inadequate teachers, and irregular and inadequate supply of free textbooks, etc., as some of the barriers in ensuring quality education.

Ram (2011) found that enrolment rate in schools had increased, yet the learning achievement level had declined over the years.

According to Nanda (2013), 92.8 per cent primary schools had drinking water facility, and 74.87 and 6.16 per cent had toilet facility for boys and girls, respectively, in Odisha.

Nayak (2015) found that drinking water facility was available in 99 per cent schools in Odisha.

Behera (2015) conducted an evaluative study, where emphasis was laid on resource mobilisation, partnership with private sector and community organisations, and promoting education through mother tongue to implement different provisions of the RTE Act. The study also discussed and analysed various interventions and strategies to draw the attention of researchers, policy makers, administrators and educationists to address the problems that hindered the process of ensuring quality primary education, and allocating more funds to the area in order to achieve the goal of SSA in Odisha for tribal people.

OBJECTIVES OF THE STUDY

- To investigate the effectiveness of *Shishu Shiksha Karmasuchi* towards UEE
- To study the problems faced by school personnel in implementing *Shishu Shiksha Karmasuchi* at the primary level

RESEARCH QUESTIONS

- What is the effectiveness of *Shishu Shiksha Karmasuchi* towards achieving the goals of UEE?
- What are the problems faced by school personnel in implementing *Shishu Shiksha Karmasuchi* at the primary level?

METHODOLOGY

Descriptive survey research design was adopted to conduct the study. The target population comprised all head teachers (*mukhya sahayak* or *mukhya sahayika*), teachers (*sahayak* or *sahayika*), students, parents, SMC members and academic supervisors of 78 SSKs of Sankrail block in Paschim Medinipur district, West Bengal.

A sample of 10 SSKs was selected through lottery method (The target population is 78 SSKs and sample for study is 10 SSKs selected through random sampling technique). The block was divided into five regions (eastern, western, northern, southern and central) and the sample was drawn from each cluster randomly. From each region, the researcher selected two schools randomly. Thus, the total number respondents was 91 (10 *mukhya sahayak* or *mukhya sahayika*; 20 *sahayak* or *sahayika*; 20 students, 20 parents, 20 SMC members and one academic supervisor).

Three type of instruments — researcher made questionnaire, semi-structured interview and information schedule — were used. Descriptive statistics in frequencies and percentages were used to analyse the data.

RESULT AND DISCUSSION

According to Table 1, all parents and academic supervisors viewed that all SSKs had *pucca* buildings and there was not a single SSK that functioned under a tree. It shows that all SSKs had separate toilets for girls and boys, drinking water facility and electricity supply. It is found that 70 per cent SSKs have *pucca* boundary walls. All SSKs have adequate number of classrooms as per the guidelines of the Paschim Banga Rajya Shishu Shiksha Mission. All SSKs have a well-equipped kitchen with drinking water facility. Despite these, some SSKs lack few facilities. For example, only 30 per cent have disabled friendly toilets. It was also found that all SSKs do not have large doors or ramps to allow free movement of disabled children.

Table 1: Infrastructure facility

	Mukhya sahayak/ sahayika		*Sahayak/ sahayika*		Parents		SMC members		Academic supervisor	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Pucca building	10	100	20	100	20	100	20	100	10	100
Class under tree	0	0	0	0	0	0	0	0	0	0
Separate toilets for girls and boys	10	100	20	100	20	100	20	100	10	100
Pucca boundary wall	7	70	14	70	14	70	14	70	7	70
Adequate number of classrooms	10	100	20	100	20	100	20	100	10	100
Electricity supply	10	100	20	100	20	100	20	100	10	100
Separate kitchen	10	100	20	100	20	100	20	100	10	100
Preparation of food in open area	0	0	0	0	0	0	0	0	0	0
Drinking water facility	10	100	20	100	20	100	20	100	10	100
Toilets for the disabled	3	30	6	30	6	30	6	30	3	30
Large door for free movement	0	0	0	0	0	0	0	0	0	0
Ramp and support railing	0	0	0	0	0	0	0	0	0	0

Table 2: Teaching–learning process

	Mukhya sahayak or sahayika	*Sahayak or sahayika*	SMC member	Academic supervisor
Teacher–student ratio as per the guidelines	6	12	12	6
Satisfactory attendance of students	6	12	10	6
Use of child-centric play–way method	4	14	5	4
Sufficient play material	4	7	4	4
Active participation of children	10	20	20	9
Use of teaching–learning material in class by teachers	2	6	4	3

According to Table 2, *mukhya sahayak*, *sahayak* or *sahayika* and SMC members agreed that children were actively involved in all kind of activities related to the teaching–learning process. However, the academic supervisor shared that active participation of students was not found in all SSKs. All respondents (*mukhya sahayak*, *sahayak*, *sahayika*, SMC members and academic supervisor) opined that teacher–student ratio was maintained only in 60 per cent SSKs and that satisfactory attendance was found only in those schools. It was found that 40 per cent schools had a large number of students enrolled in different classes but most of them were irregular.

The *mukhya sahayak* and academic supervisor shared that teachers used child-centric play–way method of teaching and availability of sufficient play material was found only in 40 per cent SSKs. Seventy per cent *sahayak* viewed that they used child-centric play–way method of teaching in classroom transaction but faced problems due to inadequate play material. SMC members also agreed with the *sahayaks* regarding the availability of play material. All respondents agreed that in most SSKs, teachers did not use teaching–learning material in classroom due to unavailability of resources, and inadequate knowledge and training on how to use them.

Table 3: Other facilities

	Mukhya sahayak or *sahayika*	*Sahayak* or *sahayika*	Parents	Academic supervisor
Books	10	10	10	10
Uniform	10	10	10	10
Scholarship	10	10	10	10
Midday meal	10	10	10	10
Involvement of parents in school activities	3	3	3	3
Supervision and monitoring	10	10	10	10
Allocation of contingency fund	6	6	—	6
Honorarium for staff	10	10	—	10
Satisfactory quality of food	10	10	10	10
Basic life skill training	4	4	4	4
Participation of SMC members in school activities	2	2	2	2

According to Table 3, the respondents shared that all SSK students received free textbooks, uniform and midday meal. They added that students belonging to Scheduled Caste, Scheduled Tribe, minority community and those with disabilities also received scholarships. However, the scholarship was not provided on a regular basis. Only 30 per cent respondents said that parents were involved in school activities. Sixty per cent said that contingency fund for school activities was sufficient and timely. All respondents said that SSKs were supervised and monitored by a competent authority on a regular basis.

Mukhya sahayak, sahayak and academic supervisor shared that they got honorarium on time but the amount was not sufficient. Hence, they had demanded for an increase in the honorarium amount. The respondents opined that only 40 per cent schools provided training in basic life skill education.

The participation of SMC members in school activities was found negligible. Only 20 per cent respondents said that SMC members participated in school activities.

All respondents shared that as per the government order, the head of the institutions and other staff members daily checked the midday meal to be served to the children in the SSKs in terms of basic ingredients and vegetables used, taste and cleanliness maintained while preparing the meal. The academic supervisors shared that they checked the quality of the food being served to the children during supervision and found it to be satisfactory.

PROBLEMS FACED BY SCHOOL PERSONNEL AT THE PRIMARY STAGE

Lack of awareness

A majority of the respondents said that most SSKs had infrastructure facility as per the guidelines of the Paschim Banga Rajya Shishu Shiksha Mission. They, however, shared that many parents and community members were not aware of the functioning of the SSKs and objectives of the SSM, and hence, needed to be sensitised regarding the same in order to achieve the goal of UEE. Therefore, it is important that they are made aware about the role of SSKs in providing quality education to children at the primary stage.

Untrained teachers

It was found that all SSKs have adequate number of *sahayak* or *sahayika* (male and female teachers) but all of them were untrained. The minimum qualification for *sahayak* and *sahayika* is higher secondary. Therefore, many join the teaching profession just after qualifying the higher secondary examination without undergoing any professional training.

Exclusion of children with disabilities

Most students said that children with disabilities were not accepted by peers

and were even treated differently by teachers. Parents shared that disabled children should be taught in special schools as they faced several problems in SSKs, and hence, lagged behind. They said that teachers needed to pay extra attention and time to such students but they, generally, did not have time, and hence, were not patient with them. Many a time, such children made errors in simple calculation or activity. As a result, instead of explaining the problems to them patiently, there were instances of teachers scolding or screaming at them.

Incentives

As per the guidelines of the Paschim Banga Rajya Shishu Shiksha Kendra, there is a provision for incentives like uniform, grants, textbooks, scholarship and midday meal for children enrolled in SSKs. All respondents, including head teachers, teachers and parents, opined that the incentives were enough for the children. But few parents and students shared that sometimes textbooks were not available on time.

Lack of parental involvement

Head teachers explained that communication gap between parents and teachers was due to lack of parents' involvement in school activities like parent teacher meetings (PTMs). Teachers and academic supervisor underlined that schools organised PTMs at regular intervals so that teachers could discuss the progress of children with their parents but most parents did not show interest in such meetings.

Supervision and monitoring

Parents and teachers underlined that it was necessary that supervision and monitoring of SSKs were conducted by a competent authority at regular intervals and steps be taken for improvement in the quality of primary education being imparted by them. Parents said only one academic supervisor was appointed for carrying out supervision and monitoring in 20 schools. But supervision and monitoring were not frequent, which are necessary for improvement in the quality of education. On the other hand, the academic supervisor pointed out that the location of SSKs and lack of transportation facility posed a challenge in the smooth discharge of duties. As a result, she was unable to visit the SSKs on a regular basis, which is mandatory as per the guidelines. Sometimes, she reached an SSK after the morning assembly. Sometimes, she had to skip supervision due to some meeting at the BDO office. She added that the travel allowance (TA) provided to academic supervisors for school visit and supervision was also not satisfactory. The transport expense was approximately double than the amount paid as TA.

Midday meal

It was found that all schools provided midday meal to children. But from the beginning, parents were not happy with the quality of food being provided

to the children. They alleged that the menu and quality of food was not as per the recommended government guidelines. It was also found that many schools did not maintain a midday meal register. Besides, it was found that food was prepared for all students enrolled in a class. But the attendance register showed that many had not been attending school for a long time. Most schools did not provide meal on Saturdays and the attendance on that day was found to be low.

RECOMMENDATIONS

The findings revealed that the SSKs covered in this study have quality and adequate infrastructure. But there are many other challenges that hinder in achieving the goals of SSM. Based on the findings of this study, the following recommendations are made.

- Teachers, as well as, gram panchayat, need to make the local community aware of the importance of education in an child's life, and the objectives and role of SSKs.

- Teachers involved in the teaching–learning process must undergo professional training before they take to teaching.

- CWSN must be included in SSKs along with other students.

- The *mukhya sahayak* and academic supervisor must monitor the quality of food being served as midday meal in SSKs.

- The *mukhya sahayak* and academic supervisor must also regularly monitor classroom teaching activity in SSKs.

- Books and uniform must be provided to the students studying in SSKs on time.

- The honorarium of teachers must be increased timely in order to motivate them (It is, generally, increased in two or five years).

CONCLUSION

Shishu Shiksha Kendras (SSKs) were set up by the West Bengal government to impart primary education to children living in remote and backward areas of the State, who do not have access to primary schools. The aim of SSKs is to contribute to achieving the goal of UEE. The respondents shared that there were some gaps, which created hindrance in realising the goal UEE. All SSKs lack trained teachers and do not have the required infrastructure for CWSN. Parents' interest, their involvement in school activities, student–teacher ratio and inclusion of CWSN are some areas that affect the quality of education in SSKs.

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6

English Teaching in Rural Government Schools of Karnataka — A Longitudinal Study

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Abstract

This paper is the outcome of an evaluation study of an English programme called Swalpa English, Thumba Fun (SETF), designed and implemented for three consecutive years — 2012–13, 2013–14 and 2014–15 — as a large-scale, multi-year initiative by Akshara Foundation, an NGO in Karnataka. The programme was implemented in 576 government primary schools of three most backward educational blocks in Karnataka. The programme's goal was to empower teachers of grades I to IV with resourceful strategies to teach English to children. It sought to establish, in accordance with the suggestions of the National Curriculum Framework (NCF)–2005, an environment that facilitates English learning in classrooms through fun-filled, exploratory understanding. Akshara Foundation's research team conducted a longitudinal study based on a controlled before-and-after research design to examine the impact of the intervention by analysing students.

CONTEXT

English as a compulsory subject was introduced from Class I in Karnataka government schools in 2007. A majority of government primary school teachers in the State have studied in Kannada medium and few seem to have opted for English as a major subject while acquiring professional training in teaching. During informal interactions with teachers, teaching in Karnataka government schools around 2007, the Akshara Foundation found that teachers need to be provided more training in English teaching. Besides, they must be provided with sufficient teaching–learning material (TLM).

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Keeping these in view, the Foundation designed and started *Swalpa* English, *Thumba* Fun (SETF) — meaning A Little English, A Lot of Fun — an English support programme for Classes I to IV. The programme, a multi-year initiative aimed at improving English competencies of government school primary teachers and children in the State, was designed to help them get acclimatised to interactive pedagogy in primary schools. The SETF aimed to provide children with a foundation in English language learning in their early years, starting with basic communication skills. It also aimed at enhancing the capacity of teachers, starting with building their confidence and motivating them to teach English.

The programme addressed elements of 'listening, speaking, reading and writing' (LSRW) with equal emphasis. It believed that 'read and write' components must closely follow 'listen and speak' as 'listening' and 'speaking' are the first in order of literacy skills that trigger the need to communicate. For reading and writing to be meaningful, learners must get a sense of style and register of the language. Therefore, SETF's content focused on rhymes, conversation, storytelling, language activities and training modules to build the capacity of teachers.

The SETF's capacity building of English teachers was structured as an introductory five-day training programme in cascade mode. A team of teachers handpicked from government schools from the region were selected as resource persons. These resource persons were trained by Akshara's Master Trainers. These resource persons, in turn, trained English teachers at cluster level. The sessions were highly interactive. The teachers were made to work in groups and make presentations on how to use TLMs and create activities around these.

The TLMs were developed with an objective of introducing students to basic vocabulary and teaching them to frame simple sentences so that they could start reading from English textbooks provided in the government schools in two to three years. The programme, therefore, designed a 'teacher manual' to help teachers navigate classroom transaction with a
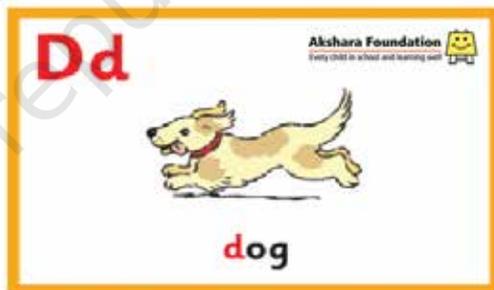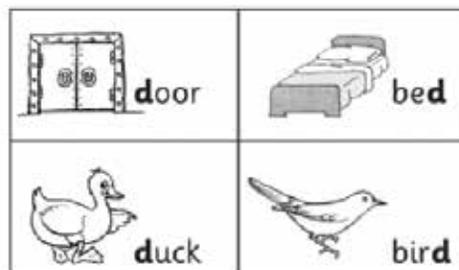

Figure 1: Flash card

Figure 2: Phonic cards

For Early Learners   ENGLISH READING CARD – 5

Tommy

I am a dog. My name is Tommy.
I like bread and milk.
I like to run after the cat.
But the cat runs very fast.

Say-aloud words:

dog	bread	water	fast
fog	brick	after	last
log	brother	master	first
jog	bring	faster	

Akshara Foundation

Figure 3: Reading card

Figure 4: Children holding flash cards

complete set of suggestive lesson plans and activities appropriate for different grades and topics, supported by charts, flash, phonic and reading cards as teaching aids, and workbooks for children. All these aids were to provide an opportunity to the children to listen and assist them in understanding English sounds (phonics), and thus, speak in English in class.

RESEARCH STUDY

A longitudinal research study was conducted by the in-house research team of Akshara Foundation, employing a controlled before-and-after research design[1] (similar to a random controlled trial) to compare the effectiveness of the programme in

terms of learning outcomes of children, classroom practices and aspects of teacher behaviour in all schools in 'treatment' and 'control' clusters. The programme was evaluated for three consecutive years — 2012–13, 2013–14 and 2014–15 from Classes I to IV.

RESEARCH QUESTIONS

- Did the teachers adapt to the pedagogical strategy of the programme and use the TLMs it suggested?
- Did the programme contribute to improvement in English learning of children?

RESEARCH METHODOLOGY

The research employed a combination of qualitative and quantitative methods. Beneficiaries of the programme were compared with non-beneficiaries by measuring outcome changes through tests administered by field investigators in the beginning, middle and end of each year in the treatment and control group. A sample of two clusters

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[1] In this design, observations are made before and after the implementation of the intervention — both of the treatment group that receives the intervention and the control group that does not.

was drawn from two educational blocks — Hoskote (treatment block[2]) and Devanahalli (control block[3]). All schools of the two clusters were considered as sample for the study.

The Akshara Foundation team developed tools to collect school and teacher information, and established classroom observation guidelines and testing principles. The overall evaluation structure was based on two dominant aspects — child assessment and classroom observation. Nine assessments were administered across three academic years, encompassing competencies included in the school curriculum taught with TLMs recommended for the programme. The test scores and qualitative data from the schools under the two groups were compared.

LITERATURE REVIEW

No language, barring one's native language, comes naturally and spontaneously to a person. Therefore, English, being a foreign language, has to be consistently learnt and taught (Behara and Behera, 2009). Krashen, an acquisition theorist, proposed an anti-structural view of learning and stressed that language learning occurs owing to the use of language in communication. In the Indian context, language learning becomes more complex due to the co-existence of multiple languages.

English is one of the three main languages in the learning formula in schools. While it was always a compulsory subject from Class V in Karnataka, it was introduced from Class I only in 2007. The approaches suggested by scholars like Prabhu advocate that a language is acquired when attention is paid not on the language form but on the meaning of messages. On the other hand, success in doing a task needs only a certain level of language proficiency, i.e., to comprehend task-related information.

According to the National Curriculum Framework (NCF)–2005, in the initial stages of schooling, English may be one of the languages used for teaching–learning activities that form an awareness of the world in a child. Further, the document says that input-rich communication environment is a prerequisite for language learning. These inputs comprise textbooks, learner chosen texts and class libraries that include a variety of genres — print (for example, Big Books for young learners) and material in more than one language. It recommends that language evaluation need not be tied to achievement with respect to a particular syllabus but must be re-oriented to the measurement of language proficiency.

Past research reveals unsatisfactory outcomes at the primary level across India. Children's ability to read English

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[2] Block where *Swalpa* English, *Thumba* Fun was implemented.

[3] Block where *Swalpa* English, *Thumba* Fun was not implemented.

has remained relatively unchanged in the lower primary class since 2007. The Annual Status of Education Report (ASER, 2014) observes that only 25 per cent children in Class V could read simple sentences in English. Of these, only 38 per cent could comprehend what they read. A literacy study conducted in 2015 by the *Sarva Shiksha Abhiyan* (SSA), Goa, pointed out poor achievement in elementary English literacy skills in children of government and government-aided primary schools, who underwent a six-month reading intervention (Noronha, DeSouza and Ferus-Comela, SSG–Goa, 2015).

Researchers have cited multiple reasons for the slow progress, including teachers' subject incompatibility. Kurrien suggested measures, such as providing a wide range of both instructional and reading material instead of prescribed textbooks to children. Kurrien further suggested that enhancing the teachers' own proficiency in English would improve students' learning outcomes.

FINDINGS OF THE STUDY

The findings are presented under three aspects of the investigation — realities of public schooling system to provide an overview of the context in which the programme was implemented, teaching–learning process and learning outcomes of children.

Public schooling system

The Akshara Foundation's research team found different scenarios across the sample schools as far as classroom structures and teachers are concerned. Most schools followed *Nali–Kali*[4] pedagogy but there was no set pattern for Class IV being handled as a standalone class or as part of a multigrade arrangement. It varied from visit-to-visit over the nine cycles of observation, revealing difficulty in following a generalised method for teacher intervention.

Out of 21 schools from both the clusters, at least two in each had combined Classes I to V. This called for flexibility in programme design. It was found that there was a school, where students of Classes I to V were taught in a single classroom and the teacher lacked focus. The teacher spent 10 minutes with each class and failed to capture the attention of any group of children. While the teacher handled one group, the rest of the groups, scattered all over the class, were not involved in any meaningful activity.

The average pupil–teacher ratio (PTR) was less than 1:20 in both the groups as recorded during the last cycle. Out of 11 schools in the control group, 60 per cent had less than 30 children. Compared to this, 30 per cent of the treatment schools had a strength of less than 30 students.

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4 *Nali–Kali* in Kannada means joyful learning. The *Nali–Kali* pedagogy is implemented by the Government of Karnataka in all government schools. This pedagogy acknowledges the primacy of multigrade, multi-level learning. Grades I, II and III come under the purview of *Nali–Kali*, each class consisting a mix of students from all three grades taught by one teacher.

The school scenario ranged from close to ideal to some 'not open to new ideas'. Some looked stage managed and some hardly bothered to care as regards to who visited the school. Often, it was suspected that the schools were pre-arranged by school staff to project a certain image.

Many studies conducted in the country show that teacher absenteeism rate is high. The PROBE survey of 1999 found no or very little teaching activity taking place in schools. A study of rural India, conducted by Kremer, et al., in 2005 found that on an average, 25 per cent of the teachers in government primary schools in India were absent on any given day.

The present study showed that on an average, the presence of teachers was 70 per cent in treatment schools as against 73 per cent in control schools for Classes I to IV. The disturbing factor that came to light was that in most schools, the teacher would ask: "When do you want me to take the class?" or "For how many minutes should I take the class?" This showed that despite the timetable being displayed in the classrooms, the teachers were ready to change their teaching plans.

The data on classroom processes highlight that schools in both the groups hovered around 50 per cent marks as regards to sharing learning objectives in all classes, i.e., I to IV. Surprisingly, the students were found to be less inquisitive during classroom interactions across all classes.

Another interesting finding of the three-year observation includes the average transaction time. *Nali–Kali* in Karnataka allocates 40 minutes of the total teaching time for English as a compulsory subject everyday as against 80 minutes for all other subjects. However, it was also found that in most lower primary schools, the bell was not rung in between periods, and in some cases, the teacher exceeded the English transaction time.

Teaching–learning process

The NCF–2005 proposes that a teacher needs to be a facilitator of children's learning in a manner that helps each child to construct knowledge. It offers scope to the teacher to participate in the construction of syllabus, textbooks and teaching–learning material. Such a role demands that teachers be equipped with an understanding of the curriculum, subject content and pedagogy on one hand, and community, school structures and management on the other. It also suggests that learners always remain at the centre of all efforts undertaken to improve the quality of education. During the study, field investigators were asked to provide their impressions of teacher competencies at every cycle. The feedback revealed that teachers from both the groups had low English language speaking skills, while their comprehension skills were better. Overall, Class IV teachers were slightly better equipped. Especially, in treatment schools, some improvement in language proficiency of teachers was observed towards the end of the year (see Figure 5 and 6).

Teachers, who did not receive training, were, generally, slack in implementation, which affected the programme. Newly transferred teachers, not exposed to SETF, did not adhere to its methods and were not interested in implementing them.

Learning outcomes

A comparative performance of students across treatment and control schools is important to establish the outcome of the programme. The study enabled to accurately track students' natural improvement in specific competencies over the cycles and identify areas where treatment had been, particularly, effective or ineffective. The data were analysed from different angles. The analysis examined the impact on learning outcomes across the three years and found that the mean
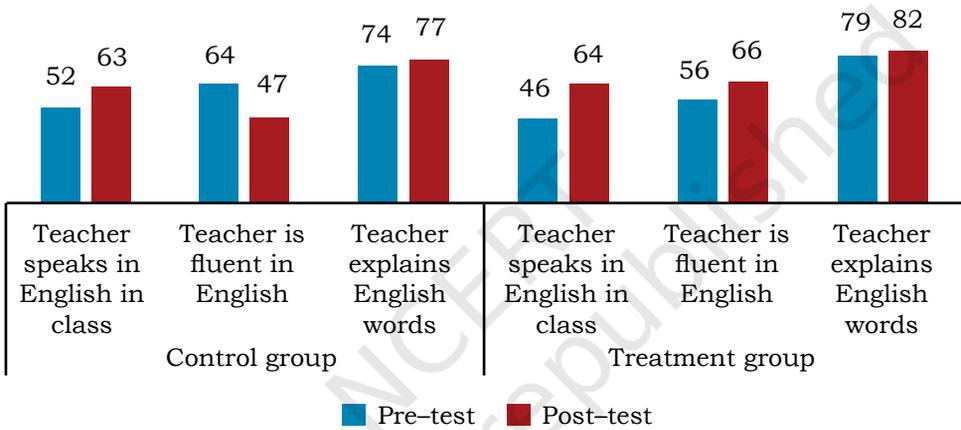
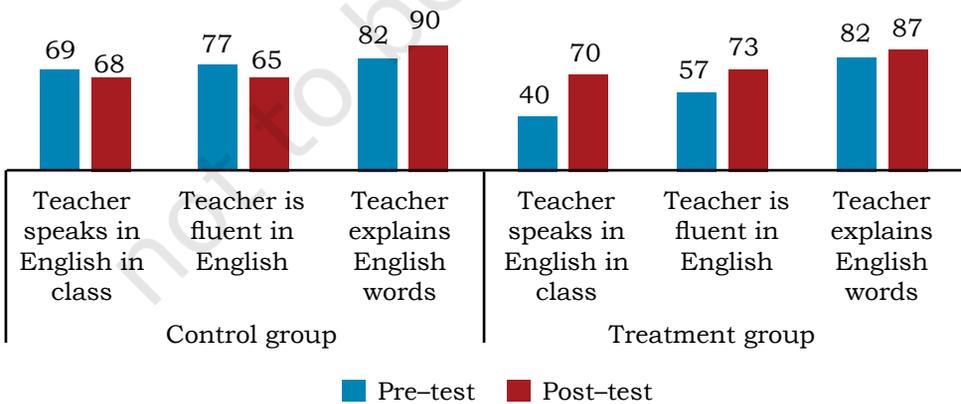*Figure 5: Average ranking of teacher competencies for Grade Nali–kali (in %)*

Figure 6: Average ranking of teacher competencies in Class IV (in %)

assessment scores of the treatment schools were higher than those of control schools across all classes.

IMPLICATIONS AND CONCLUSION

- Single–teacher schools are a challenge and multigrade teaching is inevitable. Therefore, teachers need to pay attention during pre-service and in-service training period. Strategies on managing a single–teacher school and multigrade teaching must be included in teacher capacity building programmes.

- The intervention had a positive impact on the English learning outcomes of students. The mean scores were almost always higher in the treatment schools than control schools, across all classes, in all three years of the study.

- Students of Class I performed well in three competencies — listening, speaking and reading. Class II and III students performed better in listening and writing competencies, whereas, those of Class IV scored satisfactory marks only in writing. The trend was similar in both treatment and control groups.

- The findings indicate that the situation is critical for Class IV learners, who, despite being exposed to English from Class I, could not translate it into improvement in scores. This calls for further research.

- The cohort analysis revealed that major improvements were observed in the treatment group. Additionally, it indicates that children exposed to intervention at the entry level had a greater advantage. This supports the suggestion made by NCF–2005 about the creation of an input-rich environment in language classroom.

- An interview of teachers in treatment schools revealed that they were satisfied with Akshara Foundation's TLM. They requested for more support in improving their English speaking skills and for material, such as audio and video cassettes.

- Along with enhancing the capacity of the teacher, trainings must also focus on implementing the skills as regards to English teaching. An analysis of the data on classroom observations shows that there are many factors at work that cannot be controlled. The success of a particular practice depends on the teachers' appreciation of the rationale for the practice and their skill in implementing it in the classroom. Some teachers of the treatment group appreciated this over a period of time. Teachers from the control group requested for Akshara Foundation's English kit.

- Teachers from the treatment schools appreciated Akshara

Foundation's training and found it useful. They wanted it to be extended in subsequent years and acknowledged their low English language proficiency. It is evident that teachers will benefit from regular and sustained exposure to language acquisition training programmes, starting with basic interpersonal communication skills.

To sum up, learning outcomes are influenced by multiple factors, but above all, teachers competency and students' learning capacity are important. It is imperative that for better results and larger impact, the Department of Education, Karnataka, must believe in and take ownership of programmes like *Swalpa* English, *Thumba* Fun.

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7

Peer Coaching — Live Classroom In-service Teachers' Training Programme

Ashutosh Anand*

Abstract

Peer coaching provides training to in-service teachers so that they can improve their teaching strategies while carrying out teaching–learning process in a class. For peer coaching, these in-service trainee–teachers, who may also be referred to as peer teachers, are required to visit a school, imparting training in teaching–learning strategies. The school serves as a training centre or model school. A teacher of this school may function as a coach and train these in-service teachers. A peer teacher is required to observe, cooperate, collaborate and evaluate oneself and other peer teachers under the guidance of the coach. After completion of the training, these peer teachers can also work as coaches.

INTRODUCTION

In-service teacher training programmes, conventionally, include lecture method, in which a master trainer trains trainee–teachers at the District Institute of Education and Training (DIET) and Block Resource Centres (BRC) on teaching–learning process without a classroom environment and involvement of the main beneficiaries, i.e., students. Therefore, it results in minimum understanding on how to transfer skill and knowledge to students in a classroom in trainee–teachers. Generally, master trainers are not provided with an opportunity to implement what they are supposed to tell in training to the trainee–teachers. Besides, the trainee–teachers do not get an opportunity to observe the teaching strategies of the coach and each other in real classroom conditions.

Skilled and trained teachers become master trainers and they train student and in-service teachers at

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training centres. This may disturb the teaching–learning process in their own schools and studies of the students. This type of traditional training leads to wastage of time and money with least acceptance by teachers.

Peer Coaching

Schools, following the best teaching–learning practices are, generally, selected for providing peer coaching. A teacher of such a school may take up the role of a master trainer or coach. Trainee–teachers visit the coach's school to learn and modify their teaching strategies in real classroom situation and share their experiences with each other and their colleagues in their respective schools. Peer coaching may be beneficial for all kind of schools, providing an opportunity for on-site support and helping implement new teaching techniques or strategies with quick response. Peer coaching in-service training programme for trainee–teachers may serve as an effective training ground with classroom participation, in which a trainee–teacher can observe, cooperate, collaborate and evaluate oneself, other peer trainers and the trainer.

Planning of Peer Coaching

The first step in peer coaching is the selection of willing teachers, who have brought out constructive changes in their schools in different areas like subject teaching, school management, community participation, games, craft, etc. These teachers may be trained to function as coaches and their schools as coaching centres for teachers of other schools. Each coach can train a maximum of 10 teachers (peer teachers) in one's school. The selection of peer teachers must also be done on voluntary basis, i.e., only willing teachers must be selected. The training of peer teachers needs be carried out at the selected coaching school centre or model school without disturbing the school's routine activities.

The peer teachers are allowed to visit the model school, observe the practices or activities being followed there, cooperate and collaborate with the coach in performing classroom teaching and co-curricular activities in a span of five days.

It is a participatory learning activity, where one learns by choice. The coach's job is to make visible the things that one is planning the peer teachers to notice and reflect upon. In these five days, the peer teachers get time to critically observe the practices followed in the model school and implement the same later in their own schools as per the requirement.

The suggestions of the coach and peer teachers in changing the classroom environment must always be welcomed. Besides, the peer teachers must have the choice of selecting a coach as per their requirements.

Procedure of Peer Coaching

Peer teachers have to be with coach in the model school for at least five days. The day-wise schedule, usually, followed in the model school, is given in Figure 1 (a and b). However, this schedule is flexible.
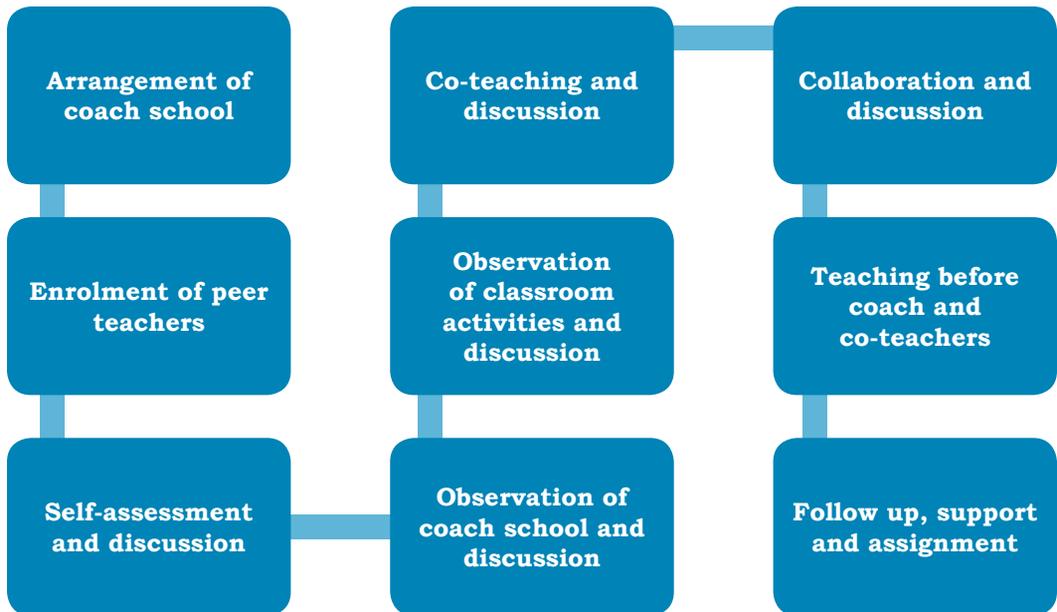
Figure 1(a): Flow chart depicting the schedule for peer coaching in a model school
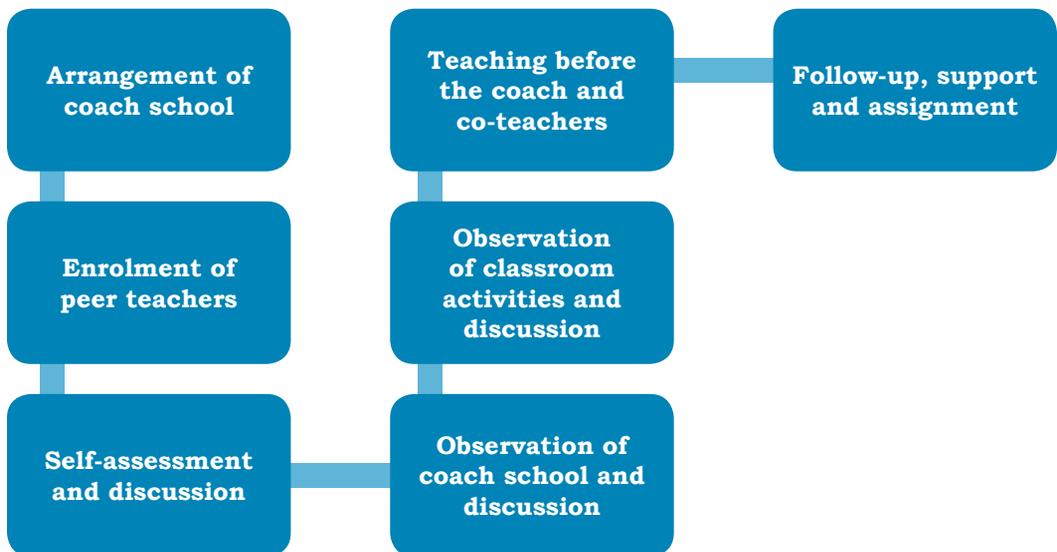

Figure 1(b): Flow chart depicting the schedule for peer coaching in a model school

Day 1: Observation of Coach's School

On the first day, the peer teachers must observe the coach's school. Here, they need to observe the coach's class as per a given format and compare it with their own school. This needs to be followed by a discussion between the coach and the peer teachers. The discussion must focus on the implementation of reforms and problems faced in bringing out the desired changes in the coach's school. It needs to go on for at least 30 minutes.

Day 2: Co-teaching

On the second day, peer teachers need to participate in classroom teaching. A peer teacher must help the coach in performing classroom activities and evaluating students on a provided format (Figure 2).

Figure 2: Peer teachers participate in classroom teaching along with the coach

Day 3: Collaboration

On the third day, the peer teachers need to collaborate with the coach in classroom teaching (Figure 3). The coach and peer teachers must together develop a lesson plan and classroom activities, which need to be performed by both. The coach and peer teachers must observe, help, correct and support each other.

Figure 3: The coach and peer teachers participate in collaborative teaching

Day 4: Independent teaching by peer teachers

On the fourth day, each peer teacher will make a lesson plan under the supervision of the coach and perform classroom teaching independently (Figure 4). The coach and other peer teachers observe the person while teaching.

Figure 4: Peer teachers doing independent teaching in a model school

Day 5: Designing the plan of action

Each peer teacher, now, has to develop a learning plan chart, in which the person will design a plan of action to be followed at one's school. A discussion session is must after each observation, activity or classroom session schedule.

Figure 5: The coach provides on-site support in a peer teacher's school

FOLLOW-UP

The coach may visit the schools of the peer teachers to provide on-site support as per one's convenience, ensuring least disturbance to one's own school's schedule (Figure 5).

BENEFITS OF PEER COACHING

- Peer coaching helps provide on-site support to peer teachers as per the requirement.
- A collaborative environment is built so both the peer teachers and coach feel that they are part of the classroom teaching process and adopt an approach for improving the teaching–learning process collectively.

- Peer teaching is open to critical observation as regards to the teaching–learning process being followed and discussion to achieve the desired goals.
- While participating in peer coaching, the coach must ensure that the routine at one's own school is not disturbed.
- Peer teachers receive real classroom experience in the model school.
- Peer coaching is a spontaneous and participatory process.
- Even students of the coach's school also get benefited by peer coaching.
- The coach also gets an opportunity to learn from discussions and the peer teachers' classroom presentation.
- Peer coaching involves less expenditure with higher outcome.

PEER COACHING IN UTTAR PRADESH

- In Uttar Pradesh, peer coaching was launched in 2015 by the State Council of Educational Research and Training (SCERT) under the guidance of Ajay Kumar Singh, *Joint Director*, SCERT, Uttar Pradesh.
- Six schools were selected as model schools and a teacher from each school was selected as a coach.
- The coaches were trained at the SCERT in Uttar Pradesh. They were asked to select interested peer teachers (maximum five).

- A five-day peer coaching session was run in each model school, providing coaching in different fields of expertise under the supervision of the *Joint Director*, SCERT. Thus, 30 peer teachers were trained with least investment.
- After coaching, the peer teachers improved in classroom teaching and the coaches also provided on-site support whenever required.
- Many teachers, who received coaching, are now being given an opportunity to coach 10 other teachers. Hence, 30×10=300 teachers will be trained by coaches under the supervision of the SCERT and founder coaches.

Conclusion

Peer coaching is a process, wherein, in-service teachers are trained in teaching–learning strategies so as to achieve the maximum output while carrying out teaching–learning process in real classroom conditions.

In future, the trained peer teachers may play the role of coaches, if they implement innovative teaching strategies in their own schools. Peer coaching may be a revolution in teachers' training as it provides an opportunity to in-service teachers to improve and modify their teaching skills by observing each other. Thus, the training provides an opportunity for peer teachers to observe, cooperate, collaborate and evaluate each other in real classroom conditions.

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Dictionary of History for Schools (Trilingual)

Seema Ojha*

Title:	*Dictionary of History for Schools (Trilingual)*
Editor:	S. Perwaiz Ahmad and Rekha Agarwal (Hindi)
Publication:	NCERT
Price:	₹135
No. of pages:	176

History, as a component of social science till the secondary stage and as an elective subject at the higher secondary stage, requires appropriate pedagogical support for effective teaching–learning process. The subject can be better appreciated, and terms and concepts used in the discipline can be appropriately assimilated, understood and learnt with the help of a dictionary that will suit the level and need of students.

There are many dictionaries available in market that explain historical terms and concepts but they are quite exhaustive and specific, and are therefore, not suitable for school students. These dictionaries have been developed either on events or on different periods of Indian history.
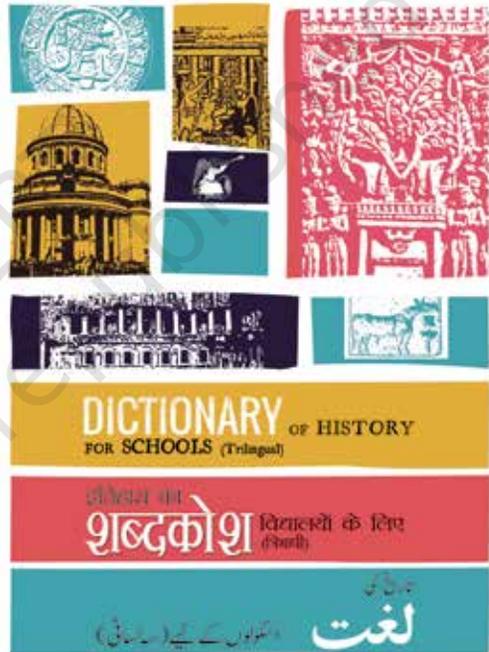
Some of them have entries only on important personalities, whereas, some have a mixture of entries on important personalities, writings, events, places, archaeological sites, and so on. They have few entries on

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terms and concepts occurring in the study of history. Because of their exhaustive design, these dictionaries are useful primarily to students at higher levels of specialised education. For school students, these dictionaries turn out to be inappropriate, thus, creating a gap in understanding the concepts.

Dictionary of History for Schools (Trilingual), developed by NCERT, covers all periods of history in India and world (i.e., ancient, medieval, modern and contemporary), and is, principally, a supplementary reference resource book.

NCERT textbooks are available in three languages — English, Hindi and Urdu. Many students may be fluent in one or two of these languages but they may not be fluent in all three. For example, a child may be fluent in Hindi and find it difficult to understand English when it is used as a medium of instruction. *Dictionary of History for Schools (Trilingual)* explains terms and concepts in all three languages for better learning of the students.

Entries have been included in the dictionary on the basis of their pragmatic usefulness. It includes as many terms and concepts that learners of history in school would likely look for. This dictionary, therefore, provides a information on terms and concepts significant to different periods in the history of India and world at the elementary and secondary stage. Even though it is, primarily, meant for school students, the dictionary

will be useful to anyone looking for basic information on a specific term or concept that one may come across while reading.

The explanations, though brief, give adequate information for elementary and secondary stage students and teachers teaching these classes. Conflicting statements and dates have been verified.

This dictionary with 410 entries has been structured in alphabetical order, making it convenient for the readers to access it easily. The alphabetisation is letter-by-letter, not word-by-word. Where two or more entries have the same initial name, they are in alphabetical order, e.g., Civil Rights precedes Civil War. This 'encyclopedic' format or chronological approach or even periodisation would ensure efficient use of this dictionary. Some entries, such as *zamindar,* defy easy chronological placement as they span many decades and transcend historical periods.

The dictionary also has several sub-entries. These sub-entries have been put under the respective main entries to make it easier for the students and teachers to understand the larger picture, for example the entry on 'absolutism' has 'absolutist' and 'absolute rule' as sub-entries.

Non-English words that are not proper nouns or titles are in italics with exception of few words, which have been acquired in English language. For example, 'samurai' is originally a Japanese word. But it has now been

included in English, so it is not in italics. Sanskrit and Pali words are in italics. The elaborate diacritical marks required by strict Indology are also not used in the text of the dictionary.

The explanations have been drawn extensively on the opinions of other scholars. The works that have been consulted intensively are included in the bibliography section.

For easy access, the dictionary also includes an index. In order to facilitate rapid and efficient location of information, and to make this dictionary useful, extensive cross-references (e.g., See also) have been provided.

Hence, *Dictionary of History for Schools (Trilingual)* is a comprehensive source and reference book for all scholars and students of the discipline.

Resource Package for Awareness in Early Childhood Care and Education

Reetu Chandra*

The early years in a child's life are considered to be crucial as these are the formative years and, primarily, shape the child's personality, and hence, lead to overall development. Therefore, these are the years, in which the child needs enriching experience, environment, nutrition and care to develop holistically. Most countries define early childhood years as the period from birth till eight years of age. During these years, all that the child learns will have a lasting effect on the mind and body. Researches indicate that investment in early years determines the quality of a person's future life.

Countries across the world have realised the need for early childhood care and education. In India, various constitutional policies and provisions have been framed for providing quality Early Childhood Care and Education (ECCE) to children up to the age of eight years. The 12th Five Year Plan acknowledges the importance of ECCE. The National Early Childhood Care and Education Policy, 2013, considers the early years as critical for the child's overall development and lifelong learning.

But early childhood education is not recognised in the Right To Education (RTE) Act, 2009. However, the Act urges all States and Union Territories (UTs) to provide free preschool education to all children above the age of three years.

Many researches and field works have been conducted and documented to build a common understanding on ECCE, yet stakeholders need to be oriented to understand the significance of ECCE and the practices that need to be followed as part of the programme.

Various national and international organisations and other stakeholders discourage rote learning. They also decry building pressure on children at an early age for reading and writing. The UNICEF, Ministry of Women and Child Development, Government

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of India, and National Council of Educational Research and Training (NCERT) have also developed a number of documents that emphasise on the need to develop an understanding of the basic concepts of ECCE and its main components. These encompass curriculum, teaching–learning process, preschool environment, and role of teacher and parent in the child's life. Educating stakeholders about the concepts of ECCE will help ensure appropriate implementation of ECCE practices.

The National Early Childhood Care and Education Policy, 2013, has, primarily, been formulated because of gaps observed in planning and implementation of earlier programmes meant for children aged below three years. Parents, teachers, education planners, education administrators and the local community are not fully aware and lack understanding about ECCE practices. They have little knowledge on the significance of early years in a child's life and their role in promoting the child's holistic development. Therefore, it is important to build an understanding among various stakeholders about the first three years in the child's life. This is the stage where a lot of care is required for ensuring the child's holistic development and building the foundation for learning. All stakeholders, especially, parents as 'caregivers' can help in providing a conducive learning environment for their children at home, thereby, educating them. Hence, there is a

need to emphasise on the importance of 'care' and 'education' as major components of ECCE.

Various policies and provisions highlighted the need to bring quality in ECCE practices, which include, curriculum, play, learning environment, nutrition, health, immunisation and hygiene. The challenge was to create awareness among different stakeholders like education planners, education administrators, teachers, parents and community members about appropriate ECCE practices. Initially, three awareness generation programmes were organised in various communities, in which ECCE functionaries from 17 States and UTs participated. During the programme, some support material like banners, leaflets, films and posters were made and used. After the successful execution of the programme, the functionaries working in the area of ECCE (members of SCERTs, SIEs, DIETs, SSA offices and ICDS of different States and UTs) observed and proposed the need for a readymade resource package, which has all necessary material to support the programme.

For addressing this need, the Department of Elementary Education (DEE), NCERT, developed 'Resource Package for Awareness in Early Childhood Care and Education' to be presented as an exemplar to all stakeholders in order to spread sensitivity and awareness on appropriate ECCE practices that need to be adopted. It has been

developed in Hindi and English to cover a wider audience. The package has a combination of folk, print and electronic media like documentary film, audio spots, posters, banners, leaflets, puppets, scripts for puppetry, drama and role-play, etc. To generate the interest of the stakeholders, a musical instrument, *Dhapali*, is also provided in the package. The documentary film *Khula Akash* (Chandra, 2013), with subtitles in English, and audio spots *Srijansheel hai Baccha* (Chandra, 2012a) in Hindi, 'Child is Creative' (Chandra, 2015a) in English, *Bageeche ki Sair* (Chandra, 2012b) in Hindi and 'A Walk to the Garden' in English (Chandra, 2015b) have been developed by NCERT to communicate the significance of ECCE. These audio–video programmes are available on NCERT website and YouTube channel for wider reach.

These programmes highlight appropriate ECCE practices that need to be adopted, the importance and need of the curriculum, preschool environment, classroom management, teacher training, role of teachers and parents.

Figure 1: Puppet show

A 'manual' is also given with the resource package to guide the stakeholders, explaining each aspect of planning and the need for executing awareness programme in the community. The manual contains a description on the usage of the material enclosed in the package.

The package also contains three scripts — *Inhe panapne do*, *Khel-khel mein* and *Sonu ki Ulajhan* in Hindi; 'Let them Blossom', 'Learning through Play', 'Sonu and his Confusion' in English. These scripts aim to disseminate meaningful messages related to ECCE practices through drama and role-play in the community. Separate scripts are also provided for puppet shows. Along with the puppetry scripts, the package contains puppets of mother, father, girl and boy.

Towards the end of the manual, different annexures are given, which have a sample registration proforma, feedback form, material required and suggested programme schedule. The stakeholders are free to adapt it for planning and implementing similar programmes in their own States and UTs.

At the end of the programme, it is important to ascertain if ECCE practices have been implemented correctly among different stakeholders and the improvement they have brought in the learners. Feedback forms have been provided in the annexure to be filled in by the participants. The package is made of waterproof material and is packed in a waterproof bag.

In 2014–15, three awareness generation programmes were organised in different communities of Uttarakhand and Delhi. More than 500 community members and 60 functionaries from various institutions of 17 States participated in the programmes. The Resource Package for Awareness in ECCE was also tried during these programmes. The modifications made in the package are based on the feedback received. Since the resource package intends to create sensitivity among different stakeholders, it is useful for them. The material provided in the package not only support the whole programme but also make it easy for the stakeholders to conduct the awareness programme in the community by effectively disseminating information and generating interest through different medium.

The price of the package (Hindi and English) is Rs 12,190. For procurement details, the Division of Educational Kits (DEK), NCERT, New Delhi, may be contacted.

The Rose Not Taken

Varada M. Nikalje*

We had shifted to a new neighbourhood. Ours was a flat on the first floor, with a balcony overlooking the lane below and row of houses on the other side. The house exactly opposite to our building had a small beautiful garden, with a round patch of green grass encircled by rose bushes.

It soon became my habit to seat myself in the balcony with my morning cup of tea, gazing at the numerous scenes of everyday life below — the enthusiastic walkers, newspaper boys, customers at the milk booth, etc. However, it was the rose bushes that would unfailingly draw my attention. I noticed how only two or three bloomed at a time but their fragrance was such that almost every passerby paused to breathe in their sweetness.

One day, a beautiful rose welcomed the morning. Its deep yellow hue competed with the sunshine and its fragrance was carried by every waft of air. A little girl, who was on her way to buy milk, noticed it. She stopped to inhale the fragrance. A smile of joy spread across her face. She gazed again at the rose, this time with desire. She looked furtively up and down the street, and then, at the closed shutters of the house to ascertain if anyone was watching her. She did not of course see me. Her hand slowly reached out to open the garden gate. It creaked and the girl gave a startled jump. Again, she looked swiftly in all directions and moved irresolutely towards the rose bushes.

She stopped near the rose bushes and took a deep breath. She stretched a trembling hand towards the yellow rose. She had almost touched it when she suddenly jerked her hand back, and ran away from the rose bush, the garden and her temptation.

For it was 'Temptation', with a capital T, that she had overcome. Not all moral lessons learnt in school, not all fables in textbooks, not all lectures of her teachers would ever have such a strong impact on her as this one real life experience had!

The little girl had faced a moral dilemma, and even though strongly tempted, had resolutely turned away, without so much as a backward glance of regret. It moved me to tears. I am convinced that the incident would have left an indelible impression on her mind and that the wisdom to differentiate between 'Right' and 'Wrong' would continue to guide her in years to come.

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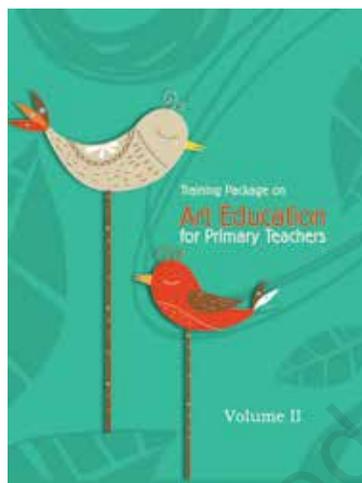
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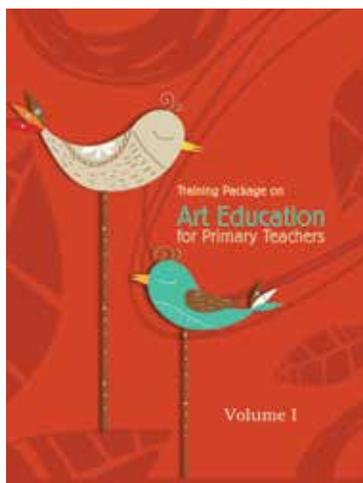
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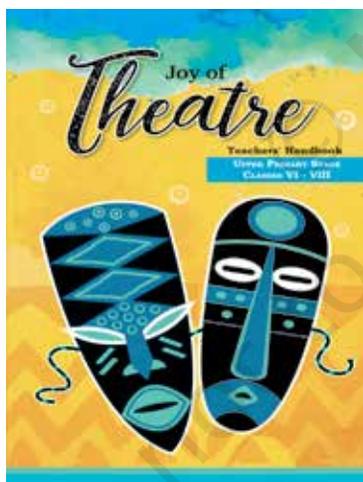Code—13125
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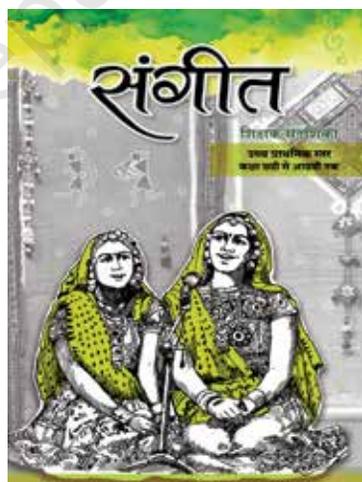₹475.00 / pp.370
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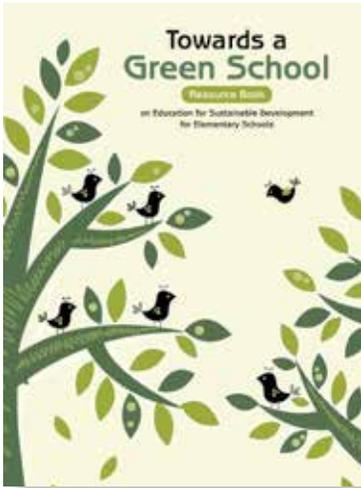₹210.00 / pp.181
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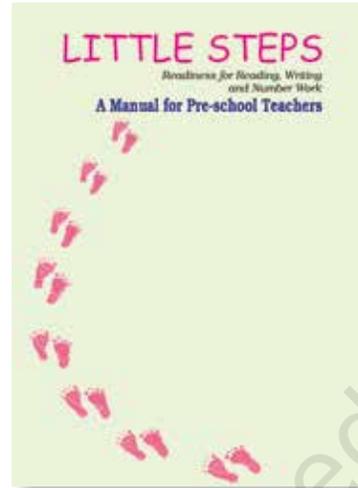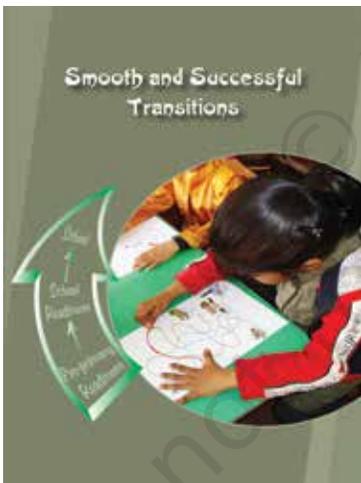ISBN—978-93-5292-017-4

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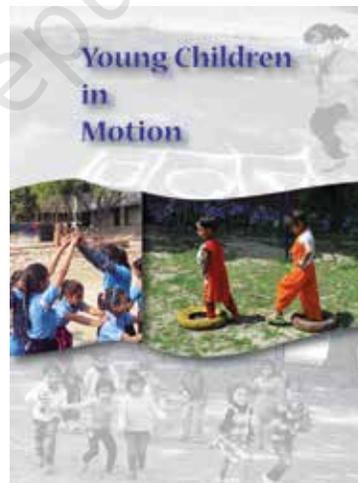at the addresses of the regional centres given on the copyright page.

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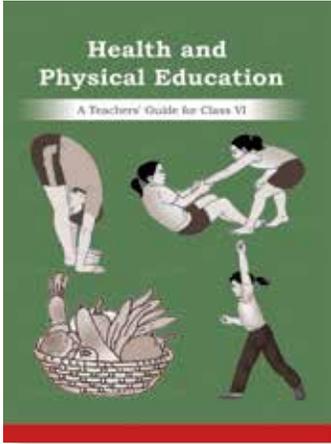Code — 13155
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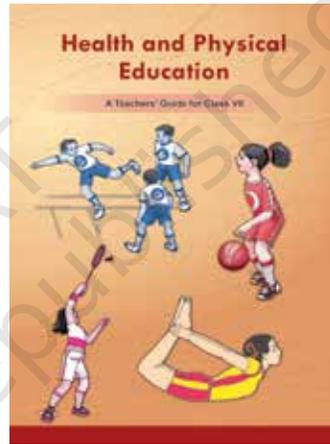
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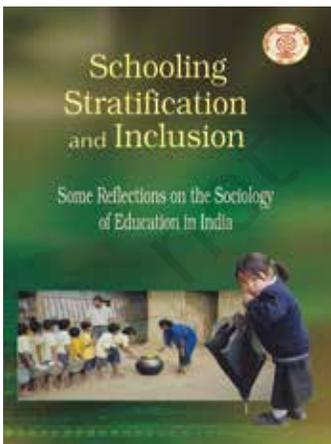Code — 13143
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The Primary Teacher invites you to write articles, field notes and reports that impact elementary education. The focus may be on issues and concerns that you are sensitive to, which you feel should be shared with other teachers working at the grassroot level.

➢ Each article should be about 1500 to 3000 words.

➢ Each article should have a short abstract in about 150 words.

➢ Use simple and non-technical language, keeping the clientele in mind, who are primary teachers.

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The papers may be sent to:

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MY PAGE...

This column would contain your letters and feedback, where you can put forward your responses, suggestions and expectations from the articles, papers and columns presented in *The Primary Teacher*. You may have issues, concerns and doubts related to teaching–learning processes, classroom practices, syllabus, textbooks, evaluation patterns, research pursuits, etc. These could also reflect the concerns of many others working in this area. Please feel free to raise these issues in this column. You could also ask specific questions that would have baffled you.

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