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Realigning Curriculum to Simplify the Challenges of Multi-Graded Teaching in Government Schools of Karnataka

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Abstract:- A comprehensive overview of the perceptions, challenges and advantages related to multigrade classrooms are discussed in detail. Multigrade teaching is more common than what is generally perceived and is considered as a solution for a variety of challenges faced by the education system of a society. A few methods of teaching in multigrade teaching are discussed in detail with advantages and limitations in following these methods. The urgent need for developing and supplying the instructional material specifically designed for teaching in multigrade classrooms is also highlighted in the article. A simple and novel solution that may be followed by teachers of Karnataka is also discussed in detail.

I. INTRODUCTION

Each classroom must have a teacher or a facilitator. When the number of classes in a school is more than the number of teachers, there must be at least one class which is not being engaged or two or more classes are combined. [1, 2] The latter is called multi-graded classroom. Multigrade Teaching is a term used to describe the teaching methods where in children from several grades are present in the same class and are provided simultaneous instruction [3, 1]. The multi-graded classroom scenario arises not only due to shortage of teachers but also due to the small enrolment numbers. The multigrade teaching scenario is prevalent in all parts of the world [3, 4, 2]. When the enrolment numbers are small the cost of providing one teacher to teacher becomes exorbitantly high and the number of multigrade-schools or classrooms are not going to decrease soon. [1, 5, 4] The curriculum and the resources provided to teachers are designed considering the classroom as a mono-grade while the reality is that many classrooms multi-graded in nature. [1, 3, 6] From the student's perspective, there is no difference in performance (vocabulary growth, math skills, reading, etc) from a school with single-grade classes and multi-grade classes. [3]

II. PERCEPTIONS AND CHALLENGES OF MULTIGRADE CLASSROOMS

- Due to the lack of availability of standard resources, the students and teachers are not very clear about their role in a multigrade classroom. [3, 2, 7] Due to availability of teaching resources, teachers may be dividing their time across the different grades which may result in hampering the facilitation and instruction of delivery if the topics discussed are very different for the different grades of students in the class. [3]
- In the current scenario, teacher in schools with multi-graded classrooms may also have to involve in administrative tasks apart from their regular academic tasks. [1, 4, 8]
- Multi-grade classrooms negatively viewed (schools with low prestige) by the public and is generally considered as low priority classrooms due to the low resource allotment. [3, 9]
- Continuous assessment of students of multi-graded classes will be a challenge to the teachers. [3]
- Generally, teachers tend to deliver the instruction catering to the average student in the class and this may lead to loss of learning to the students who are the extremes. [3]
- The teachers in multigrade schools are under-trained to provide differentiated instruction and are also under-resourced. [1, 3, 9]
- The students in the multi-grade classrooms may be get distracted when instructions are given to one group of students at a time. This may lead to no learning by the students in the class. The distraction due to multiple instructions to students at the same time is not noticed in mono-grade classrooms. [2, 9]
- If the schools are understaffed, and the teachers are not trained in multigrade teaching, the academic achievements will be lower. This will result in more students opting for private tuition. The private tuition may become an additional financial burden on parents. [1, 5, 10]

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- The preparation time required to plan for teaching a session in multigrade classroom is much higher and the success of a session depends on the quality of planning. The teacher of these classrooms must be well versed with the contents of the subjects across grades and must possess good classroom organization and management skills [6]. Lack of specialized teaching materials for multigrade classrooms continue to be challenge to the teachers. [4, 7, 9, 8]

III. ADVANTAGES OF MULTIGRADE CLASSROOMS

- The students of multigrade classroom tend to become independent learners. [3, 7]
- The students will also have increased opportunities to teach their peers from lower grades which help in strengthening their previous knowledge. [3, 4, 7, 10, 6]
- The self-esteem of students of multigrade classrooms was higher than the students from monograde classrooms. [3, 9]
- The student of each grade will have additional time to explore the subject on their own since the teacher has to engage students of several grades. [4, 8] This approach helps in addressing the differentiated needs of diverse students in a classroom setting. [11]
- In some research, it was found that the academic achievements of students from multi-grade classrooms is higher than the students from mono-grade classrooms. [2, 10] This trend is not consistent in all situations. [3, 8, 6]
- There is higher familiarization of teachers and students due to continued interaction which can improve communication between teachers and students of multi-grade classrooms. [8]

IV. METHODS OF TEACHING IN MULTI-GRADE CLASSROOMS

By proper alignment of different topics and themes, the students will learn the concepts in a spiral approach. The teacher could deliver the required depth for the concepts based on the grade of the students [4, 9]. To improve the student learning the students can be grouped for a specific purpose and the group could be specifically supported by remedial classes, assignments, etc. [4, 11] Senior students could be tasked to assisted to students of lower grades to promote peer learning and improve the communication and leadership skills of students [8].

Another method of handling multigrade teaching is one in which the students of different grades are together taught the topics of a particular grade each year. This method is not practiced due to its low achievement of student learning because students of higher grades may not be interested to learn about lower grades. This type of teaching practice is more suited for teaching arts, yoga, sports, etc. [4]

V. CURRENT ACADEMIC PLAN FOR MATHS

The application of a mono grade teaching syllabus in the multigrade teaching situation creates problems for teachers handling multigrade classrooms. The monograde classroom syllabus commonly available for use by teachers/students has the following characteristics:

- It is not structured for multigrade classes,
- It places a heavier workload on teachers in creating new materials and resources.
- There are no specific training or support for teachers to address a wider range of students' needs.

Syllabi need to be prepared specifically for the multigrade teaching context or adapted to it. The key factor in an ideal model of a multigrade classroom must be flexibility. One of the greatest difficulties in promoting multigrade Teaching is the inflexibility of grade-based curriculum currently in use. [1, 3, 10]

Table 1 and Table 2 show the academic plan for mathematics being followed in the schools across the Grades 4&5 and Grades 6&7 respectively in the state of Karnataka.

Table 1: Current Mathematics Academic Plan for Grades 4 and 5

Sl. No.	Month	4th grade	5th grade
01	June	1. Perimeter and Area of simple geometric figures	1. 5-digit numbers 2. Addition
02	July	2. Numbers 3. Additions 4. Subtraction	3. Subtraction 4. Factors and multiples 5. Fractions
03	August	5. Multiplication 6. Division 7. Circles	6. Angles 7. Circles 8. Length
04	September	8. Mental arithmetic 9. Fractional numbers	9. Perimeter and area 10. Data handling

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05	October		
06	November	10. Addition and Subtraction of Money 11. Measurement - Length	11. Multiplication 12. Division
07	December	12. Weight 13. Measurement of volume	13. Mental arithmetic 14. Decimal fractions 15. Money
08	January	14. Time 15. Data handling	16. Weight and volume 17. Time
09	Feb	16. Patterns and symmetry 17. Tangrams and Designs	18. Symmetrical figures 19. Three dimensional figures
10	March	18. Solids	20. Patterns
11	April		

Table 2: Current Mathematics Academic Plan for Grades 6 and 7

Sl. No.	Month	6th grade	7th grade
01	Jun	1. Knowing our numbers	1.Integers
02	Jul	2. Whole number 3. Playing with Numbers	2. Fractions and Decimals 3. Data handling
03	Aug	4. Basic Geometrical Ideas 5. Understanding Elementary Shapes	4. Simple equations 5. Lines and angles
04	Sep	6. Integers 7. Fractions	6. The triangle and its properties 7. Congruence of Triangles
05	Oct		
06	Nov	8. Decimals 9. Data handling	8. Comparing quantities 9. Rational Numbers
07	Dec	10. Mensuration 11. Algebra	10. Practical Geometry 11. Perimeter and Area
08	Jan	12. Ratio and proportion 13. Symmetry	12. Algebraic expressions 13. Exponents and Powers
09	Feb	14. Practical Geometry	14. Symmetry 15. Visualizing Solid shapes
10	Mar		
11	Apr		

In any given month of an academic year, different chapters are to be taught in a multigrade classroom. This requires increased quantity and variety of instruction to be given in the same class duration. The different chapters to be taught simultaneously may lead to higher challenges when the classroom has a student with diverse learning needs and levels [10]. This will not be an effective and productive way of handling a class and affects the learning pace of the children. [3] Therefore, it is suggested to plan the academic curriculum, such that, the grades considered for multigrade teaching have similar or spiral chapters and the teacher can provide a simple set of differentiated instructions. [3]

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VI. REVISED ACADEMIC PLAN FOR MATHS

Table 3 and Table 4 show one way of revising the academic schedule so that similar chapters are taught across different grades in a month. This will be easy for the teachers to handle the multigrade classrooms and to create Modules that cater to this prevailing scenario [4].

Table 3: Revised Mathematics Academic Plan for Grades 4 and 5

Sl. No.	Month	4th grade	5th grade
01	Jun	1. Perimeter and Area of simple geometric figures	9. Perimeter and area
02	Jul	2. Numbers 3. Additions 4. Subtraction	1. 5-digit numbers 2. Addition 3. Subtraction
03	Aug	5. Multiplication 6. Division 7. circles	11. Multiplication 12. Division 7. Circles 6. Angles
04	Sep	8. Mental arithmetic 9. Fractional numbers	13. Mental arithmetic 4. Factors and multiples 5. Fractions
05	Oct		14. Decimal fractions
06	Nov	10. Addition and Subtraction of Money 11. Measurement - Length	15. Money 8. length
07	Dec	12. Weight 13. Measurement of volume	16. Weight and volume
08	Jan	14. Time 15. Data handling	17. Time 10. Data handling
09	Feb	16. Patterns and symmetry 17. Tangrams and Designs	20. Patterns 18. symmetrical figures
10	Mar	18. Solids	19. Three dimensional figures
11	Apr		

Table 4: Revised Mathematics Academic Plan for Grades 6 and 7

Sl. No.	Month	6th grade	7th grade
01	Jun	1.Knowing our numbers 2.Whole number 3.Playing with Numbers	
02	Jul	4.Basic Geometrical Ideas 5.Understanding Elementary Shapes	5.Lines and angles 6.The triangle and its properties 7.Congruence of Triangles
03	Aug	9.Data handling	3.Data handling
04	Sep	6.Integers 7.Fractions 8.Decimals	1.Integers 2.Fractions and Decimals
05	Oct		
06	Nov	12.Ratio and proportion	8.Comparing quantities 9.Rational Numbers

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07	Dec	11.Algebra	4.Simple equations 12.Algebraic expressions 13.Exponents and Powers
08	Jan	10.Mensuration 13.Symmetry	11.Perimeter and Area 14. Symmetry
09	Feb	14.Practical Geometry	10.Practical Geometry 15.Visualizing solid shapes
10	Mar		
11	Apr		

VII. CONCLUSION

Multi-grade teaching is here to stay in multiple geographies and is more widespread in government schools. To aid the teacher the simplify the task of handling multi-grade classrooms, it is essential align the curriculum to align the concepts for common instruction delivery in the classrooms. The teachers of multigrade classrooms must be strengthened by provided suitable training to strengthen the specific multi-grade teaching skills. Additional lesson plans suitable for multi-grade need to be provided to teachers so that they can visualize and customize and modify the lesson plans to suit their specific needs. The teachers must also be trained in the different methods of providing differentiated instruction in the multi-grade classroom.

REFERENCES

[1]. N. Bajpai, "Challenges of Multigrade Class Teaching," International Journal of Science and Social Science Research, vol. 1, no. 1, pp. 13-18, April-June 2023.
[2]. D. R. Goel, "Effectiveness Of Multi-Grade Teaching And Monograde Teaching At Elementary Stage - A Comparative Study," Journal of Positive School Psychology, vol. 6, no. 6, pp. 5236-5243, 2022, .
[3]. A. LIttle, "Multi-grade teaching - A review of research and practice," - Education Research Paper, p. 63, 1994.
[4]. D. D. K. Gupta, "Multi grade Teaching- Challenges and Opportunities," Educational Metamorphosis, vol. 2, no. 2, pp. 35-40.
[5]. ASER, "National Findings," ASER, 2022.
[6]. R. O. O. Maricor Ballesteros, "BEST PRACTICES OF MULTIGRADE TEACHING IN LUNA, APAYAO, PHILIPPINES," International Journal of Novel Research in Education and Learning, vol. 3, no. 6, pp. 61-73, 2016.
[7]. F. T. A. Aleli C. Tayoni, "The Multigrade Education Program: A Policy Evaluation," International Journal of Academic Pedagogical Research (IJAPR), vol. 7, no. 1, pp. 1-6, January 2023.
[8]. B. I. W. K. Khajornsak Buaraphan, "Current policy and practice concerning multigrade teaching in Thailand," Kasetsart Journal of Social Sciences, vol. 39, pp. 496-501, 2018.
[9]. B. B. Janet Condy, "What challenges do foundation phase teachersexperience when teaching writing in ruralmultigrade classes?," South African Journal of Childhood Education, vol. 4, no. 2, 2014.
[10]. D. U. Khanal, "An Effectiveness of Multi-Grade Teaching At The Basic Level of School," SSRN Electronic Journal, May 2022.
[11]. B. K. Taylor, "Content, Process, and Product: Modeling Differentiated Instruction," Kappa Delta Pi Record, pp. 13-17, 2015.