

Embracing Diversity: Toolkit for Creating
Inclusive, Learning-Friendly Environments
Specialized Booklet 4

Practical Tips for Teaching Multigrade Classes

Practical Tips for Teaching Multigrade Classes



Inclusive
Learning-Friendly
Environments



United Nations
Educational, Scientific and
Cultural Organization

UNESCO Bangkok
Asia and Pacific Regional Bureau
for Education

Practical Tips for Teaching Multigrade Classes

Bangkok: UNESCO Bangkok, 2013

68 pp.

(Embracing Diversity: Toolkit for Creating Inclusive, Learning-Friendly Environments Specialized Booklet 4)

1. Inclusive education. 2. Multigrade teaching 3. Classrooms. 4. Teacher's guide.

ISBN 978-92-9223-450-8 (electronic version)

Copy Editor: Clive Wing

Design/Layout: Prang Priyatruk

© UNESCO 2013

Published by the

UNESCO Asia and Pacific Regional Bureau for Education

920 Sukhumvit Rd., Prakanong

Bangkok 10110, Thailand

The designations employed and the presentation of material throughout this publication do not imply the expression of any opinion whatsoever on the part of UNESCO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The authors are responsible for the choice and the presentation of the facts contained in this book and for the opinions expressed therein, which are not necessarily those of UNESCO and do not commit the Organization.

UNESCO Bangkok is committed to widely disseminating information and to this end welcomes enquiries for reprints, adaptations, republishing or translating this or other publications.

Please contact ikm.bgk@unesco.org for further information.

Embracing Diversity: Toolkit for Creating
Inclusive, Learning-Friendly Environments
Specialized Booklet 4

Practical Tips for Teaching Multigrade Classes



Inclusive
Learning-Friendly
Environments





To day is Sunday

My name is:

DESS

My na
MIA
H
MMSD
-05



Ensuring the right to education is at the very heart of UNESCO's mission, a right also affirmed and recognised by its Member States. Such education must also be a quality education. Thus, UNESCO emphasises not merely the right to education but also, in particular, the right to **quality** education for all.

UNESCO has a special mandate to assist countries and guide them towards achieving education for all. The backlog in meeting the target of basic education for all, coupled with new demands for the expansion of other levels of education, places a formidable burden on countries. In addition, many countries face severe budget constraints and have little or no room for maneuvering. This is compounded by a lack of qualified, skilled teachers. For small communities, often located in remote, isolated, and poor regions of a country, schools with multigrade classes become a viable alternative.

However, while multigrade classrooms address the right to education by providing more students with an education, quality becomes harder for teachers to ensure when they need to work with more than one grade at the same time. Multigrade teachers may find their work particularly challenging when teaching a curriculum designed for monograde classes and when needing to react to the varied students' interests and abilities within their classrooms.

This UNESCO publication, **Practical Tips for Teaching Multigrade Classes**, offers a holistic, practical guide to making multigrade classrooms more inclusive and learning-friendly. The guide, which supplements the UNESCO Inclusive Learner-Friendly Environment Toolkit, focuses on the specific issues which need to be addressed when teaching students in multigrade classrooms. It provides practical guidelines to successfully teach groups across grades without compromising quality. The guide emphasises planning appropriate teaching and learning strategies and maximising the use of available resources, as well as managing an inclusive, learning-friendly classroom containing children with diverse backgrounds and abilities.

It is my hope that this publication will become a very practical tool for use in multigrade classrooms and training programmes in Asia and the Pacific and around the world.

A handwritten signature in blue ink that reads "Gwang-Jo Kim". The signature is fluid and cursive, with the first letter of each name being capitalized and prominent.

Gwang-Jo Kim
Director, UNESCO Asia and Pacific Regional Bureau for Education

A blue icon depicting five stylized human figures of various sizes and orientations. Some figures are holding or interacting with rectangular blocks, suggesting a play or educational activity. The figures are arranged in a loose circle around the blocks.

Aacknowledgements

This specialized booklet is truly a cooperative product. It was first drafted by two education specialists in Asia, Rashmi Diwan, Associate Professor at the National University of Educational Planning and Administration, New Delhi, and Mona Sedwal, Assistant Professor at the Mata Sundri College for Women, University of Delhi. It was redrafted and edited by Sheldon Shaeffer. It also benefitted from the comments and suggestions of educators around the world. UNESCO Bangkok would like to thank all of them for their contributions including Room to Read, Mary Sylvette T. Gunigundo (SEAMEO INNOTECH), and Catherine Young (LEAD Asia). In addition, valuable inputs were received from Idit Shamir, Joanne Narae Narksompong, Fuchsia Hepworth, Adrien Boucher, Min Bista, Nantawan Hinds, Jessica Aumann, Abdul Hakeem and Dieter Schlenker.



©UNESCO/Dhaka

CONTENTS

Introduction	1
Understanding Multigrade Teaching: What Is It and Why Do It?	1
Seeing Challenges as Opportunities	2
Taking advantage of diversity within and between groups	2
Balancing time and multi-tasking	3
Engaging your students and keeping them focused on learning	3
Breaking your isolation as a multigrade teacher	3
Managing a Multigrade Classroom	4
Understanding the Current Context and Creating a Future Vision	5
Preparing the Classroom	7
Organizing Groups and Activities	9
Being Efficient and Flexible in the Use of Time	11
Using Positive Discipline	13
Demonstrating Sensitivity to Each Student's Uniqueness	14
Teaching Effectively in a Multigrade Classroom	17
Adapting the Curriculum and Lesson Plans	18
Developing Teaching and Learning Materials	22
Developing Teaching Strategies	27
Strategy 1: Teach all groups together	28
Strategy 2: Teach one grade while others work independently ...	29
Strategy 3: Teach one subject to all grades and at varying levels of difficulty	29
Strategy 4: Develop activities for non-taught groups	29
Strategy 5: Develop peer, cross-age and cross-grade teaching strategies	31
Strategy 6: Relate learning with daily experience	32
Teaching in Your Students' Mother Tongue	33
Creating Active Learning Strategies	33

Assessing Learning and Teaching Performance in Multigrade Classes	35
Focusing More on Learner Assessment Than on Evaluation	35
Practicing Self-Reflection on Your Teaching and Your Students' Learning	39
Good Multigrade Programmes and Practices	41
Escuela Nueva	41
School in a Box	42
No More Schools / IMPACT	42
Multigrade Program in Philippine Education (MPPE).....	43
A Graded Approach to Reading	44
Learning and Teaching in Multigrade Settings (LATIMS).....	44
Summary: Ten Lessons	47
References	51

LIST OF FIGURES

Figure 1: Three Dimensions of Classroom Management	4
Figure 2: Example Floor Plan for a Multigrade Classroom	8
Figure 3: Factors Affecting Children's Learning.	15
Figure 4: Stages of Lesson Planning	19
Figure 5: Cyclic Process of Assessment	37



Introduction

UNDERSTANDING MULTIGRADE TEACHING: WHAT IS IT AND WHY DO IT?

At one level, multigrade teaching is an important and appropriate way to help nations reach their internationally-mandated Education for All targets and national Millennium Development Goals by providing good quality education to children who are often neglected by their education system because they live in small, poor, and remote communities. More importantly, it is an approach that can help schools in these communities and teachers in these schools serve their students better by providing them an education that is both good quality and relevant to the community in which they live.

Many teachers in Asia and the Pacific - teachers such as you - need to teach students from more than one grade in one classroom. And many - in Cambodia, China, India, Indonesia, the Philippines, Viet Nam and elsewhere - are already doing so. The approach being used is known as **multigrade teaching - teaching classes of students not only of different ages and abilities but also at different grade levels.** Multigrade teaching is not always easy, but doing it well means that you are educating children who otherwise would not be able to go to school and therefore helping them gain the knowledge and skills they need for a more promising future.

But many education systems, teachers, and even parents, think multigrade teaching is somehow "second class" - the last choice of poor systems and something to move away from as quickly as possible by building more classrooms and hiring more teachers, or closing small schools and forcing children to go long distances to larger ones. In many countries, however, not only in Southeast Asia but in many parts of Europe, North America, and Australia, multigrade teaching is the first choice for managing a classroom. This is true for several reasons:

- ◆ It helps children, especially those in remote and isolated areas, realise their right to education and therefore learn what they need - and want - to learn

2 Practical Tips for Teaching Multigrade Classes

- ◆ It is a cost-effective approach to providing schooling to children often excluded from your education system
- ◆ It encourages children from different backgrounds to learn with the help of their peers and therefore promotes cohesiveness, cooperation, and healthy competition among students, strengthens interpersonal and leadership skills and develops a positive attitude towards sharing
- ◆ It benefits you as a multigrade teacher by helping you to plan your work better and be more efficient in your use of time
- ◆ Through the variety of teaching practices used in multigrade classrooms, it contributes to your students' cognitive development

SEEING CHALLENGES AS OPPORTUNITIES

All teaching offers challenges, and as a multigrade teacher you have specific things to think about to ensure you get the best out of the students in your class. These challenges and the opportunities they present include:

Taking advantage of diversity within and between groups

Handling **one** grade with students from diverse family backgrounds, ethnic/linguistic traditions, and socio-economic circumstances and with different ability levels (and some with experience in pre-school programmes and some without) is difficult enough. Combining more than one grade in a multigrade context is even more of a challenge. This requires not only specialized content knowledge and teaching-learning methods but also personal values which respect and welcome diversity in the classroom. What is important to understand, however, is that such diversity should be seen not only as a challenge but also as an opportunity for providing better quality education for all your students.

Balancing time and multi-tasking

The secret to being a successful multigrade teacher is to balance your time effectively. This is a challenge when addressing the different learning needs of groups of and individual students, but preparing a variety of activities that keep all groups of students engaged in the multigrade environment is an opportunity to develop new and more effective teaching practices.

Engaging your students and keeping them focused on learning

Your responsibilities as a multigrade teacher multiply as you create a space for each group to keep your students engaged in one or another activity. Such activities should be both meaningful and intense enough that nothing distracts your students from their work when different grades are sitting in the same room and carrying out other activities at the same time. You also need to develop activities on which all students can work - and help each other with. It is here that your ability to keep students focused on the activity they are involved in is important.

Breaking your isolation as a multigrade teacher

As many multigrade schools are in geographically remote locations, you might feel isolated as a multigrade teacher. This makes it difficult to keep aware of the best practices and developments in other schools like your own - and more broadly elsewhere in your education system. But such a context makes it important to find innovative ways to break this isolation. Groups of similar schools in a geographic area can create a cluster to organize regular and frequent meetings. The local community can be involved in generating and sharing resources and support for your school. And networks and partnerships with groups such as community-based organizations can also offer suggestions for improving teaching in your school.

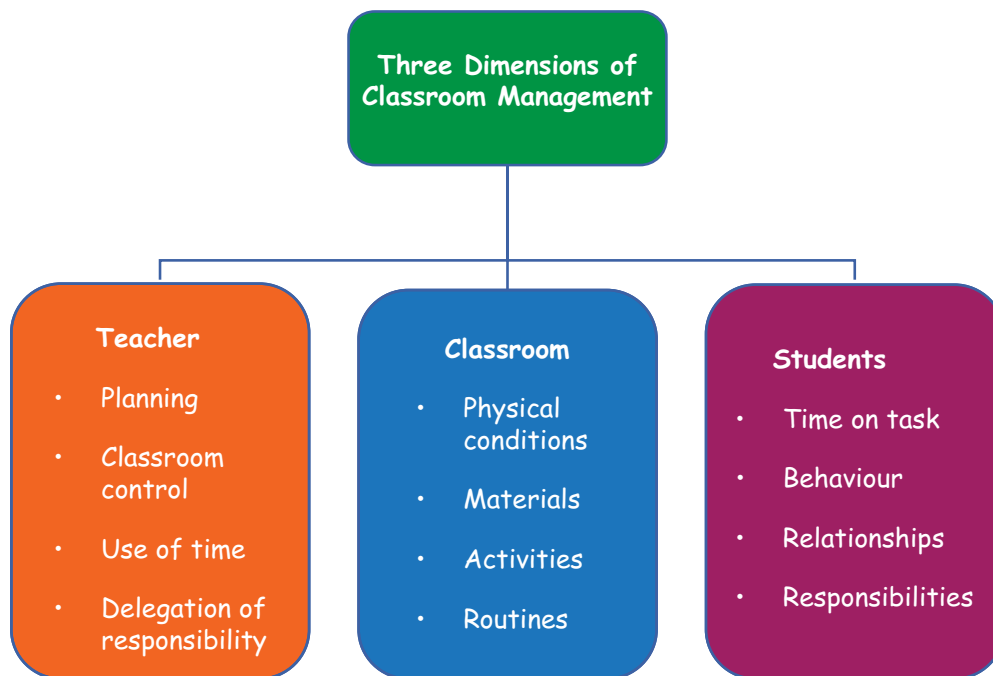
The sections below will explore further the various challenges and opportunities presented by multigrade teaching with a focus on managing and teaching effectively in a multigrade classroom and comprehensively assessing your students' personal development and achievements.



Managing a Multigrade Classroom

Multigrade teaching is all about classroom organization, student management, and, ultimately, the successful transmission of grade-specific curricula. It is your responsibility as a multigrade teacher to plan and organize your classroom to get the best results from the space and resources available to you. Management of a multigrade classroom revolves around three dimensions as depicted in Figure 1.

Figure 1: Three Dimensions of Classroom Management



Source: Adapted from a figure published by the Ministry of Basic Education and Culture (1996), *Teacher Basic Competencies Manual*. Windhoek, Republic of Namibia.

As a multigrade teacher, you are the key to planning, designing, and managing a range of both grade-appropriate and mixed-grade activities for children to keep them engaged in learning. Your efficiency and

effectiveness rest on creating a classroom conducive to learning by developing exciting and stimulating activities ranging from group work to independent study. You play a central role in managing the classroom in the following ways:

- ◆ planning the use of the classroom "space", especially flexible seating arrangements for both you and your students
- ◆ planning and carrying out multiple lessons at the same time
- ◆ designing activities for students to keep them involved
- ◆ creating, arranging, and using teaching and learning materials
- ◆ establishing norms of behaviour expected of students to keep them learning

UNDERSTANDING THE CURRENT CONTEXT AND CREATING A FUTURE VISION

In order to realise these functions effectively, you need to focus on many levels of classroom management. This starts with an assessment of what your classroom looks like now and your vision of how you want it to look in the future.

When you first get assigned to a school which has - or should have - multigrade teaching, it is essential to take time to **gain a clear understanding of the context of your multigrade classroom**. You can start by asking yourself the following questions:

- ◆ Where is your school located? How far do your students travel to get to school?
- ◆ What grades are you teaching? What age and ability range is in your classroom? How might you best work with and take advantage of a wide range of ages and abilities?
- ◆ What kinds of family background do your students come from? What is their economic status?
- ◆ What language do your students speak at home? How well do they understand and speak the national language? What might you do

6 Practical Tips for Teaching Multigrade Classes

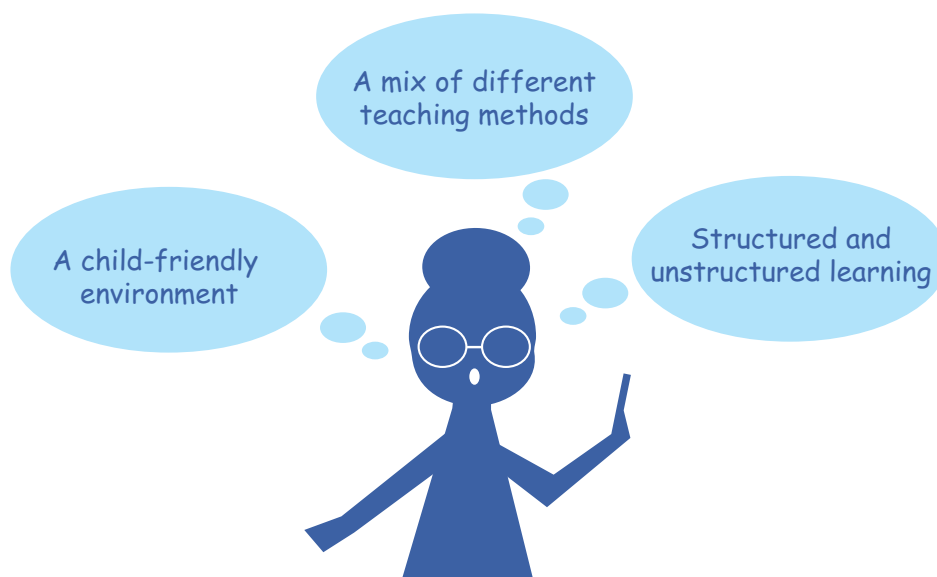
to ensure they learn what they need to learn in the language you use in the classroom?

- ◆ How many have had some kind of pre-school experience? What can you do to help those who have not had this experience?
- ◆ Do any of your students have special education needs in regard to physical or cognitive disabilities? What can you do to respond to these needs?
- ◆ What resources do you have to make the classroom and school work better?
- ◆ According to the national (and perhaps local) curriculum, what should be taught to each grade and how well have your students learned the curriculum so far?
- ◆ To what extent do your head teacher/principal and the other teachers in your school understand and practice multigrade teaching? If their understanding is limited, what can you do to increase support for your work?
- ◆ Do the parents of your children understand and support multigrade teaching? Again, if not, what can you do to help them understand the need for such teaching?

Once you have a good understanding of the students in your class, take time to **create a vision in your mind about what you want your multigrade classroom to look like.**

- ◆ A welcoming, inclusive, healthy, protective, and child-friendly environment which helps your students - most of whom have probably not had any pre-school experience - feel comfortable in the school and ensures that they do not drop out before completion of the primary school cycle
- ◆ A rich mixture of grade-appropriate and mixed-grade teaching, peer learning through group work and pair work, personalised teaching, independent learning through tutoring, and teacher and student interactions to make sure that all children learn and that no child is excluded from learning because of gender, language, poverty, disability, or any other reason

- ◆ A disciplined classroom with a harmonious learning environment which mixes structured learning (e.g. for teaching science, arithmetic, reading, writing) and unstructured learning (storytelling, singing, plays, games, etc.)



PREPARING THE CLASSROOM

Once you have created your vision, you can start translating it into practice by planning what you want to do in clear and simple terms. A crucial part of planning an effective multigrade classroom is organizing its space so that it allows free movement and can be used for different activities by individual students, individual grades, small groups, and the whole group. The traditional seating arrangement with a teacher facing all students in rows with a chalkboard on the wall does not work in a multigrade classroom where several activities are happening at the same time. Therefore, you will need to think about how your classroom can be divided into different areas. The key word in this process is "flexibility" - the ability to move students and desks around inside the classroom to create the kind of learning spaces you desire.

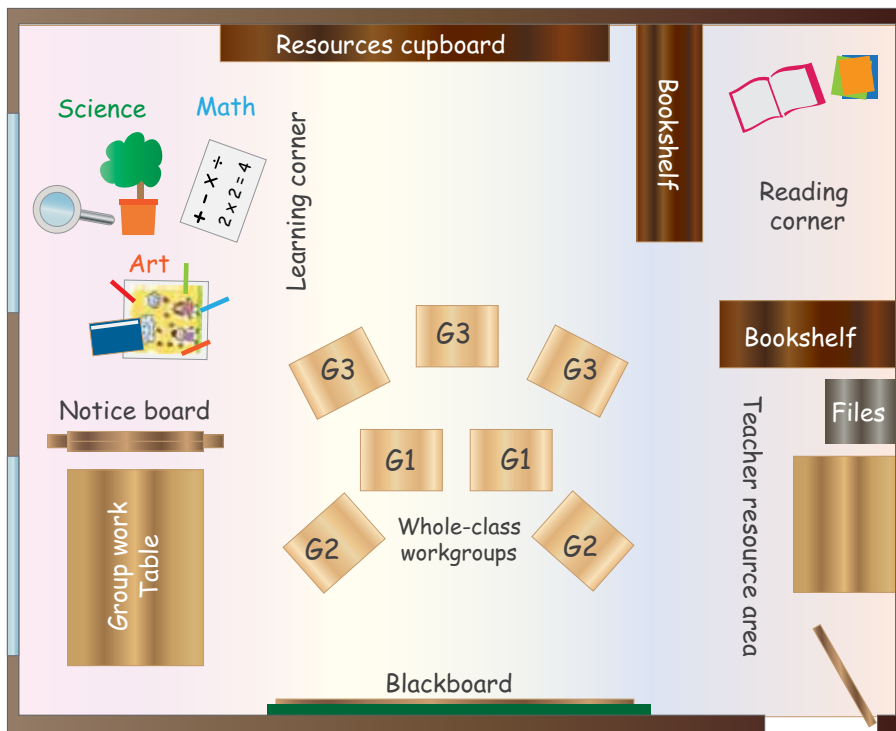
This requires some preparation before you start teaching, such as:

- ◆ Understanding the space in the classroom and the resources available for conducting classes

8 Practical Tips for Teaching Multigrade Classes

- ◆ Deciding on the types of teaching methods and student activities possible in the space available given the number of students and grades in your classroom; e.g. if a lot of group work is planned, you may want to create several areas for group discussion/activity and leave less space for one-on-one teaching and independent learning
- ◆ Drawing a floor plan of the classroom with a seating plan that promotes your desired learning activities and shows the placement of furniture, books, materials, etc. (see Figure 2); think about how you can create spaces for individual and group learning in such a way that students experience barrier-free access to the most used areas within the classroom as well as to classroom resources and materials

Figure 2: Example Floor Plan for a Multigrade Classroom



Source: Adapted from a figure published by the Northwest Regional Educational Laboratory (1999), *The Multigrade Classroom: A Resource Handbook for Small, Rural Schools*. Portland, USA, available from http://educationnorthwest.org/webfm_send/1151 accessed 17 Dec 2012

Figure 2 shows one way you could arrange your classroom for effective multigrade teaching. You can adapt this floor plan to suit your classroom set-up and resources.

ORGANIZING GROUPS AND ACTIVITIES

In the multigrade classroom, several simultaneous activities go on at the same time. You therefore need to arrange the classroom for activities that engage students with minimum disturbance and with adequate direction and supervision. Your task becomes especially crucial in forming various kinds of groups; this largely depends on the nature and purpose of the subject taken up for study at a particular time. Some subjects may require mixed-ability groups while others benefit from whole-class groups; some may require peer tutoring while others require independent assignments and self-directed learning with systematic support from you and peer tutors.

The process of forming groups mainly follows two approaches: **grouping students purposively by age, grade, or ability** and **grouping students of different backgrounds**. The first groups are often formed on a semi-permanent basis over weeks of instruction and are usually designed to cover a specific part of the curriculum in depth and across grade levels (e.g. the detailed study of local farming techniques and products). The second groups are more spontaneous and usually created for specific tasks over a shorter time period (e.g. writing a short story on something that happened in the local village). The box below describes one way flexible grouping can be achieved.

Other methods of organizing groups can be explored and adapted to fit your students' age and maturity levels. To make this more feasible, you can create activities which do not require your direct supervision but rather are based on mixed-ability and same-ability groups, peer tutoring, and a wide variety and range of individual work assignments such as solving arithmetic sums or practicing hand writing.

Forming Mixed-Grade Groups

Ibu Hasnah is a teacher in Indonesia assigned to a class with students from both Grade 3 and Grade 4. After observing her class, she noticed there were students of many different abilities in each grade group. While wanting to make sure all her students learned what they needed to learn in their grade, she also wanted to give the more able children in her class a chance to contribute and create a feeling of unity among all the children. When she was first planning for her new multigrade class, therefore, she decided not to make a seating chart according to grades but to mix grades together and form **ability groups**. This gave the more able children a chance to share their skills regardless of grade level and also helped to develop class spirit and solidarity. She therefore grouped students by ability for reading and arithmetic instruction, continued with these groups, and steadily expanded them across grade levels.

In all other subject areas, she chose **common areas within each subject** as a starting point for instruction. For example, all students had instruction units on food in their textbooks so Ibu Hasnah asked her students to chart the food they ate and then held class discussions regarding their findings on nutritional value, calories, a balanced diet, etc. Grade-level books were used for additional study. A similar strategy was employed for poetry. Students shared poems from their grade-level language books as a total class. Ibu Hasnah then assigned independent study to one ability group level while a group poem was completed in the other levels. The first strategy, therefore, was an open-ended task involving all students (i.e. collecting nutritional information or reading poems orally), and the second moved towards closed-task activities individualized to student ability levels.

Reading presented special problems because the range of skills among levels spanned five grades. Ibu Hasnah therefore developed a **rotating schedule** that allowed her to work with three groups each day and with all the students every two days; while she worked with one reading group, the other students worked independently. To prevent interruptions during group instruction, she designated three students as "pupil teachers". They served as tutors for students needing help. Students were also encouraged to help each other and to develop friendship across grades. They learned to cooperate and work together because it was modelled and encouraged by Ibu Hasnah. This turned out to be a very positive and rewarding experience.

(Adapted from Pratt and Treacy, 1986)

BEING EFFICIENT AND FLEXIBLE IN THE USE OF TIME

It is important to make the best use of time available when involving students in different activities. The choice and organization of activities are essential conditions for good multigrade classroom management. You should also have a clear idea about how to divide your students by both grade and age levels, and what types of activities are best for different groups. This will help you plan activities which suit multigrade situations. For example:

- ◆ Grades 1 and 2 may need more teacher support in addition to aids such as posters, charts and art work appropriate to their age; this is especially true for children who have not had any pre-school experience. They also need to gain a firm foundation in early literacy and numeracy, and students who have difficulty in these skills need extra help.
- ◆ Grades 3 and 4 may need more peer tutoring along with instructional guides and dictionaries to help them through their more complicated curriculum and ensure they continue their mastery of basic skills.
- ◆ Grade 5 and 6 require considerable teacher support and monitored independent study in addition to problem-solving exercises. This is especially true if there is an examination at the end of primary school that determines whether they successfully complete that level and/or can enter secondary school.

To assist you in your teaching, it is often useful to delegate some classroom responsibilities to students as class leaders, peer tutors, and helpers for your activities. These assignments can be changed regularly so that all students have some role to play depending on their particular abilities and skills. A job chart listing assignments with the name of the responsible student can be useful in this process. The selected students need to be oriented and guided on how to lead groups and help their classmates, ensure all group members participate in the assigned activity, discourage bullying, and help maintain harmonious relationships among students. These arrangements aim to enable the members of each group to learn together and share the results of their work with you, other groups, and other grades.

12 Practical Tips for Teaching Multigrade Classes

The box below shows one way you can use your time effectively to get the most out of a multigrade situation.

Scheduling Activities and Delegating Responsibilities

In order to meet the learning needs of all students at different levels, you will need to schedule activities carefully, including cross-age tutoring. You can introduce key concepts to all students and then create individualized activities for the different grade and/or ability levels in the classroom.

For example, in a lesson on telling time, you could make cardboard clock faces with your students. Start by explaining how hours and minutes work to the whole class. Your youngest students can then draw hands on the clock faces to represent different times while you give a more detailed activity to older students - perhaps asking them to write out a diary of their day and showing what time they do each task with a drawing of a clock face. Reading, spelling, and arithmetic can also be handled in this manner.

Other subjects can be taught as a whole group with each student working at his or her particular level; art, social science, science, and music are frequently handled in this way. Your students might also work together to complete tasks while you meet students individually. You can give older or more able students extra responsibility to help with this. For example, one student could act as librarian each week and read a story to younger children while you work with the older students.

During special occasions such as celebrations or festivals which involve the entire school, all the students can work together so that a gifted second grader, for example, can work with a fourth grader or slower students can work with younger students for special skills. And because multigrade schools are often isolated and serve as the centre of the community, parents can also be given some responsibility - why not ask them to help arrange field trips and special programmes or even assist in the classroom?

Since there are many tasks to be performed during the course of a school day, time flexibility must be a norm for a multigrade classroom. But remember that as the context changes, your strategies for utilising time to teach a particular concept or theme may also need to change.

USING POSITIVE DISCIPLINE

Putting students of more than one grade together in one classroom that already has limited space can sometimes create problems. You must therefore plan your classroom activities keeping in mind the need to prevent too much disruption. Establishing norms of student behaviour in the beginning can go a long way towards solving this problem. To create an environment of positive discipline in the classroom, and to make sure you never use any kind of physical, corporal punishment, you can:

- ◆ Use the first week of school to familiarize your students with their new (or improved) multigrade environment - assign responsibilities for tasks to be carried out, show them the different spaces for each activity, involve them in arranging the classroom and keeping things organized, and have them practice moving the classroom furniture and resources (and themselves!) around the room as needed for the different parts of the school day.
- ◆ Ask your students to discuss in groups the rules they follow at home and at school, have the groups report back to the whole class what rules they have in common, and then write some of these up on the board. Students then vote for their top six rules, and you can use these as the basis of your class's code of conduct.
- ◆ Decide on consequences for students who follow or do not follow instructions. Special praise for students showing desired social skills and good behaviour and other kinds of positive feedback work well to produce positive energy among students. You should be observant and supportive when any child shows inappropriate behaviour and also help students understand that such behaviour is not tolerated and that there are certain rules governing discipline that need always to be followed.
- ◆ Help children working in smaller groups to understand what behaviour you expect during group activities - taking turns, encouraging all group members to contribute, etc.

- ◆ Specify the rules to be followed for each space - for example, if you have created a reading corner, explain to your students that they must be quiet and not talk when they are in that space.
- ◆ Demonstrate a code of conduct to students not only through direct instruction but also by modelling good behaviour yourself.

DEMONSTRATING SENSITIVITY TO EACH STUDENT'S UNIQUENESS

Not all students are the same and like all teachers you must be aware of and respond to their differences. Many factors make every child unique and different both in how they best learn and what they can learn. Students in multigrade schools generally live in rural, remote, and sparsely populated areas. Their families may be very poor, and they may be living in home conditions not conducive to study. They may also speak a language at home different from that in the school, and some may have special education needs related to stunting due to malnutrition, impaired vision and hearing, and other physical or cognitive disabilities. In addition, in some settings girls may be more disadvantaged than boys in terms of work in the home and parental expectations, while in other settings boys are less likely to attend school.

The educational background of parents also enhances or decreases the interest of their children in learning at school. Studies have shown that parents' education, and mothers' education in particular, makes a difference in the enrolment, retention, and learning achievement of a child. It is therefore important for you as a multigrade teacher to understand the family and individual backgrounds of each of your students and manage the resulting differences in their interest and ability to learn. Figure 3 demonstrates the factors affecting the motivation and ability of a child to learn.

Figure 3: Factors Affecting Children's Learning

You can respond to the different backgrounds and abilities of individual students in several ways:

- ◆ ensure that your classroom is genuinely inclusive by welcoming all children regardless of their gender, socio-economic status, ability, and language/ethnicity
- ◆ personalize the content you deliver and the methods you use to the individual backgrounds and needs of each of your students and be especially sensitive to early signs of disinterest or faltering
- ◆ help new students, especially those who have not been to a pre-school, to overcome the fear, anxiety, and nervousness that they often have when they enter school
- ◆ make an effort to get to know your students so that you understand their living conditions, family backgrounds, and

the expectations they hold for the school. Reinforce this in conversations with their families and visits to their homes; such information can help you find the best possible ways to manage your classroom and shape an environment that facilitates learning for all - your principal aim as a multigrade teacher

- ◆ promote classroom interactions across ages, grades, and ability levels - and between boys and girls - in order to stimulate cognitive development, improve language skills, and enhance vocabulary

This last point is especially important. In many multigrade contexts, girls may be relatively disadvantaged in education compared to boys. It is therefore important first to get girls enrolled in school and then to participate and achieve equally with boys. You can encourage girls to take part in classroom activities (sometimes in groups with other girls, sometimes in groups with boys) by having the same expectations of success for them as you do for boys, and ensuring they have an equal opportunity to ask and answer questions in class and to take responsibility for classroom affairs.

 Teaching Effectively in a
Multigrade Classroom

Once you start teaching in a multigrade classroom, how effective your teaching is will largely depend on how well you are prepared to handle multiple activities. The goal is to create diverse instructional strategies both suitable to the curriculum content and based on the needs of your students. Management of teaching calls for you to strategically plan activities to engage the students through direct teaching, with a peer tutor, in a small group, or in independent study.

As noted above, every child comes to the school with the potential to learn but also with a unique personality and set of needs and abilities. This means that you need to develop and implement teaching strategies that enable you to address the needs of each child linked to his or her age, maturity, interests, capacities, and capabilities. It will take time to get to know each of your students, but you can begin by trying to make your multigrade classroom inclusive and conducive to learning for each child and group. Useful suggestions include:

- ◆ **Group strategically.** For some activities, divide your students into mixed-ability groups. This will encourage students of different backgrounds to include each other in their work. You may then want to group students by age or grade for skill subjects (such as reading and writing, arithmetic, and science)
- ◆ **Prepare flexible and appropriate materials.** For grouping to be effective, materials and teaching must be varied and made challenging to accommodate the learning needs of students with different levels of ability. Develop a variety of worksheets to be used with diverse groups in multigrade classroom situations; these could include teacher-guided activity sheets, group-learning worksheets, individual practice worksheets, and peer-directed instruction sheets
- ◆ **Promote self-paced learning.** While helping students to perform activities together, at the same time ensure that they

are allowed to move through the curriculum at their own pace. This should help them achieve the set learning objectives for each grade's curriculum

- ◆ **Give extra attention to children with special education needs.** Ensure that students with disabilities, learning difficulties, and other needs can achieve milestones as others do. You may need to include special preparation in terms of separate worksheets and more individual attention depending on the nature and degree of their special education needs

ADAPTING THE CURRICULUM AND LESSON PLANS

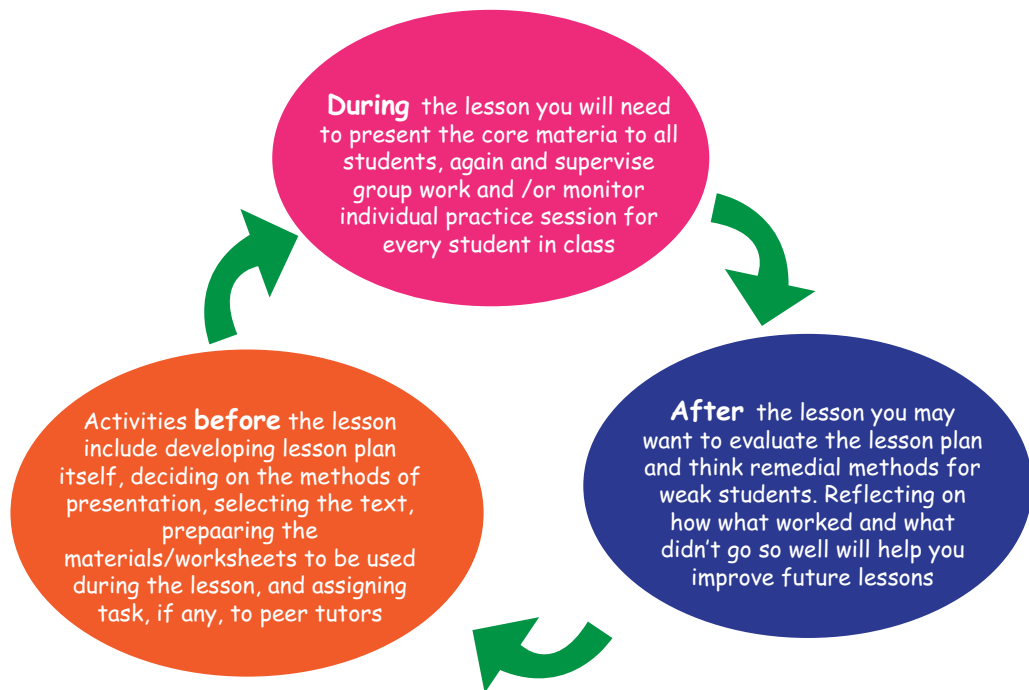
Revisiting and redesigning the national curriculum to suit multigrade situations, according to the number of classes to be combined together, is essential for teaching the required curriculum content in a phased and continuous manner and for making it appropriate to the cultural and socio-economic context of your school. To do this, you may find these suggestions useful:

- ◆ select common themes from one subject suitable for all the grades in your multigrade classroom
- ◆ develop a flexible timetable for all the grades throughout the session on this theme
- ◆ develop daily lesson plans for each unit related to this theme with the help of textbooks and reference material as per the curriculum
- ◆ select activities linked to the curriculum that are to be conducted in the class
- ◆ develop relevant worksheets for individual or group practice
- ◆ relate concepts from the curriculum to examples from your students' daily lives
- ◆ prepare quizzes to assess your students' mastery of the curriculum content

- ◆ nurture talent in the school by organizing related co-curricular activities such as music, creative arts, games, and physical education

In a multigrade classroom the curriculum is best delivered in an integrated sequence of learning activities. To begin, you can concentrate on a theme, not individual subjects or grade levels. This becomes the focus for all learning activities for the whole class. You can add to the effectiveness of the integrated unit by linking it to as many different learning areas as possible. You will need to take time to become thoroughly familiar with the content materials for each theme. Work with students interested in a particular topic to explore this as it facilitates their, and your, learning. It is also important that you are systematic in planning lessons and developing teaching and learning materials relevant to each of the curriculum units.

Figure 4: Stages of Lesson Planning



Integrated approaches assume that multiple resources will be used by students during the course of the lesson. Textbooks will be one of these resources, but these will be supplemented by a variety of additional print, audio-visual, and community and human resources. Field trips, community speakers, videos, library books, newspapers, and magazines may be used as resources if available in rural, remote areas. Learning how to use a variety of resources to find information is one of the intended learning outcomes of integrated learning.

When developing a sequence of learning activities for an integrated unit, you have to aim for maximum variety. In the course of a thematic unit, therefore, students in different grades will need to work as a whole class, in small groups, in pairs and sometimes individually. Students will interact with you, other students, members of the community, and various learning materials. The core theme and sub-topics are seen as natural contexts for students to use and further develop their skills and abilities in language and literacy, arts/social studies, arithmetic, science, and the creative arts.









Lesson planning for multigrade teaching depends on the number of grades combined in the classroom. But whatever the number of lesson plans needed per day, there are three stages of planning to consider: planning activities before the lesson, during the lesson, and after the lesson.



Example Lesson Plan

Subject: Science		Topic: Classifying living things	Grade: 3-4
Learning outcomes	By the end of this lesson, you will have: <ul style="list-style-type: none"> ◆ collected and displayed real items in a logical way in your classroom to support your students' learning about grouping living things ◆ used model building as a way of recording what your students know about different plants and animals 		Materials and notes
Activity1: Collecting evidence of life around us Whole class	Tell your students that they will be developing a display to show non-living and living things around them. Explain that it would not be right to display real animals and plants. They should not damage or kill anything living. Instead, rather like detectives, they should hunt for clues and evidence of any living thing - for example, feathers, droppings, leaves and seeds. Choose six things from the display - three living and three non-living - and display them on another table. Gather your students round the table and ask them which of the six things are living and how they know this. By careful questioning and discussion you should be able to draw up a list of the seven characteristics of living things. You might want to include this list of characteristics as part of the display. Finally, you could ask students to categorise the living things into further sub-groups: animals, plants and so on. Ask them to think about what defines each group and where each item sits in the display.		Give pupils several days to bring in things for the display. Seven characteristics of living things: <ul style="list-style-type: none"> ◆ Nutrition ◆ Reproduction ◆ Growth ◆ Respiration ◆ Sensitivity ◆ Movement ◆ Excretion
Activity2: Building models of plants Small groups according to grade or ability level	Scientists group things by similarities and differences in the basic patterns of their structure or form. One way to find out what your pupils observe about patterns in plants is by asking them to make models. Organize the scrap materials so that each group has a selection to use. Write the following instructions on the chalkboard: <ul style="list-style-type: none"> ◆ Talk about what a plant looks like ◆ Then make models of the plants from the scrap materials If higher grades or more able students finish first, work with them to develop a lexicon (a small dictionary) to show which words the students knew to describe the parts of plants that they were familiar with (you might find it helpful to put up these words round your classroom and encourage the students to use them when talking about their models).		Before this activity, ask your students to bring in scrap materials and collect some yourself. Scrap materials might include: tin, cardboard, string, tape, straws, plastic bottles, fabric, paper, netting, wire.

Adapted from TESSA Science Module 1: Looking at Life, Section 1: Classifying living things <http://www.tessafrica.net/node/975> accessed December 2012

Example Lexicon of Plant Terms	
Simple terms	More advanced terms for older pupils
 Root	Tap root, Side root
 Stem	Bark
 Leaf	Vein
 Bud	
 Flower	Petal, Anther, Pollen, Ovule
 Fruit	Fleshy, Dry, Case
 Seed	Radicle (baby root)
 Plumule	(baby shoot)

TESSA Science Module 1: Looking at Life, Section 1: Classifying living things <http://www.tessafrica.net/node/975> accessed December 2012

DEVELOPING TEACHING AND LEARNING MATERIALS

One of the challenging but also enjoyable tasks of being a multigrade teacher is the chance to prepare a wide range of teaching and learning materials for the grade levels and subjects you teach. To keep this organized, each set of grade-level materials can be placed in a folder including specific content to be taught and guidelines on how to teach it in the most effective way.

Teaching and learning materials should be developed keeping in mind flexible grouping across grades. If possible, the following can be used as support material in the class and be openly displayed for all students to use: books, play materials and toys, specific subject kits, story

books, musical instruments, and dictionaries (and even an encyclopaedia if available), along with paper, pencils, crayons, paint, colour markers, a whiteboard or chart paper, maps, and models. You can also develop student worksheets on different concepts and themes in the curriculum. These should be designed keeping in mind the level of each grade and of individual students. The worksheets may be prepared from the reference materials available in the class and on the basis of the theme chosen for delivery in the class.

Example Worksheet for Primary Classes

Match each riddle with the correct answer:

Riddle	Answer
I have a long neck and I am the tallest animal. Who am I?	Tree
My stem is big and strong and I have many branches. Who am I?	Ant
I am the strongest and heaviest land animal. Who am I?	Giraffe
I am a creeper, my stems are weak and I lay on the ground. Who am I?	Elephant
They call me the smallest animal. Who am I?	Watermelon

Source: Available at <http://sdpspitampura.com/class2hh1.pdf> accessed August 2011.

This worksheet for primary grades is a good example of a resource that is student-friendly and helpful in developing skills both in reading comprehension and in the naming of animals and plants.

Teaching and learning materials are required in large quantity due to the diverse grades studying in one classroom. These can include visual aids such as picture cards, flash cards, and word/sentence cards as well as games (a word-search or quiz) and charts (a calendar or weather chart). They can also include audio resources; for example, if you have

access to the radio, why not use that as a teaching aid? Your multigrade classrooms might be in a location where the resources at your disposal are very limited. It might therefore be difficult for you to produce and duplicate worksheets. However, teaching and learning materials can be developed using locally available materials that are of low cost and relevant to the local culture. These might include local plants and flowers; materials such as limestone, charcoal or clay; and discarded items like tin cans, plastic bottles, milk boxes, magazines and bicycle parts. This is easiest if you come from the local area and are familiar with such resources, but your expertise as a multigrade teacher lies in improvising materials to be integrated into teaching. It can also be useful to use the local community as a resource in other ways; for example you could start a school garden, go on nature-trail walks in the local area, or invite members of the community to talk to the class.

To keep track of the materials you have developed for your classroom - or might need to develop - it is helpful to make a list of topics to enable you to identify resources and integrate the resources that are relevant to the topic at the right time. You could add the resources available in your school to the table below.

Example Resources for Teaching Geography		
Theme	Topic	Example materials and resources
Geographical features	Geography, climate	Students make tools to measure climate: sundial, wind vane, rain gauge, etc. Create worksheets with a space for students to fill in their observations of the weather over a week or to use on field trips to observe the local geographical features Your resources:
Flora	Natural plants and trees	Plants grown by people in the community, local farmers and other experts, nature trail walks Your resources:
Fauna	Wild animals, tame animals	Student's pets, picture books, local farmers and other experts, and why not organize a visit to a farm? Your resources:

Transportation and construction	Transportation systems, construction works, traditional architecture, construction materials	Ask a local builder or other expert to bring in some tools and talk about their work, go on a walk around the school to observe buildings and transportation systems Your resources:
Population	Number, features, distribution	Sticks or other small objects can represent numbers of people, create worksheets with maps that students can colour-code according to population density Your resources:
Cultural activities of different (ethnic) groups	Festivals, fairs, games, traditions and costumes, traditional musical instruments, songs and dances	Students, parents or community members could demonstrate traditional songs, costumes, games and instruments etc. Your resources:
Typical art works and local literature	Folk songs, traditional songs, idioms, proverbs, and sayings	Collect examples from the local community: students could choose a song or story to rehearse and perform this to the class or create a picture to represent a proverb, etc. Your resources:
Local history	Local cultural personalities, historical characters, major historical events of the locality	Ask local experts to come in to talk about the history of your local area. If your town or village has a library or museum, why not organize a visit? Your resources:
Production	Traditional handicraft, trades, and local products; tools for local production and livelihoods	Ask students to bring in examples of traditional handicrafts, ask local experts to lead a session on a particular handicraft - students could do their own weaving/carving, etc. Your resources:
Environment and sanitation	Protection of the forest and natural resources, protection and improvement of water resources	Create worksheets on the water cycle or other environmental topics, do practical activities like building a school garden; in an art lesson use scrap materials to talk about recycling Your resources:

For example, if you live in an area where there are many kinds of trees, as part of science teaching you might select a topic on "Trees". You could start by facilitating a discussion on trees and their benefits and then make a grade-specific chart for describing a tree. Give one chart to each

group (or individual student); the groups can look at different trees and compare their charts. At the end of the lesson bring the whole class back together for a final activity or follow up lesson from the textbook. After the lesson you will have an inventory of trees in the school area. You can display the charts in the classroom and follow this up with a lesson from the textbook. The same method can be applied to other topics.

Example Lesson Plan

Subject: Science		Topic: Trees	Grade: 1-4
Learning outcomes	By the end of this lesson, you will have: <ul style="list-style-type: none"> ◆ Observed the appearance and characteristics of trees in the school area ◆ Discussed the benefits of trees to animals and humans 		Materials and notes
Activity 1: Introduction Whole class	Introduce the new lesson. 'Trees are the most important plants on earth because they support life. Trees provide many types of living places and food for animals. People have used trees and their products for many different purposes. Different trees are suited to different habitats. The roots of trees help to hold the soil together and prevent erosion.'		
Activity 2: Tree charts Small mixed-ability groups	Divide the class into mixed-ability groups. Each group observes a tree and discussed their observations. You may want to ask the following questions: <ul style="list-style-type: none"> ◆ What animals use the tree? ◆ What do people use the tree for? ◆ What are the benefits of the tree? Each group fills in a tree chart. The groups then exchange their charts to cross-check.		
Activity 3: Tree diagram Whole class	Hang up or draw a picture of a tree detailing its characteristics and the animals that use the tree. Ask students to observe the picture and check whether they want to include other characteristics from their chart. Use a piece of cardboard to hide parts of the picture and ask students to recall what they have observed. If you have been able to create word cards in advance you can ask students to stick them on the picture.		

Source: Adapted from the Multigrade Material Development available from <http://petermerckx.tripod.com/multinset/id4.html>, accessed July 2012.

Example Chart on Trees

Grade	Activity	Description: Parts of the Tree	Remarks: Describe Features
1	Discussion Students draw the tree		All students observe the same tree
2	Discussion Students draw the tree and name the parts of the tree	Trunk, bark, roots, leaves, flowers, fruit, seeds	All students observe the same tree
3 and 4	Discussion Students draw the tree, name the parts of the tree, and describe these features	Trunk, bark, roots, leaves, flowers, fruit, seeds	Group activity: every group chooses a different tree and later compares the results with the whole class

Source: Adapted from the Multigrade Material Development available from <http://petermerckx.tripod.com/multinset/id4.html>, accessed July 2012.

DEVELOPING TEACHING STRATEGIES

Depending on the purpose of a particular lesson, as a multigrade teacher you enjoy the freedom to decide:

- ◆ what stage of instruction requires your personal attention and coaching and when to work closely with one group or grade
- ◆ what stage of learning requires self-study or exercises in an individual student's workbook, when students should work in groups, and when they can do exercises individually
- ◆ which activities can be handled by your peer tutors
- ◆ what activities can promote more group work independent of you as the teacher

These approaches can be combined with one another depending on the situation inside the classroom. You have the flexibility to experiment

with them until you find the most appropriate fit for your students. In doing this, you may find the following strategies useful:

Strategy 1: Teach all groups together

You can decide which lessons or units are suitable to be taught to all students together. In this kind of instruction, you provide the same content, use the same teaching and learning methodology in transmitting the content, and expect the same learning outcomes from all students, irrespective of their formally assigned grade - but because of your multigrade classroom, you can have older students work with younger ones both for better learning and to build a sense of classroom solidarity.

Example Whole-Class Activity

Imagine you have planned to teach counting from 1-10 to a lower grade. You can explain the numbers by telling a story to all the groups in the classroom in the following way:

- There was a king who had a single daughter, the Princess -----1
- For the past two days, she was sick-----2
- Three doctors visited her -----3
- They gave her four medicines -----4
- Every five hours, she was made to eat a nutritious meal -----5
- She felt better in six days -----6
- On the seventh day, she got up from bed -----7
- On the eighth day, she told her mother -----8
- That she wanted one chocolate each day for the next nine days-----9
- On the tenth day, she was fit and fine, up and about-----10

Involve higher grades by using a number chart and asking each student to point to the correct number as it is read out. After you have read the story, ask students to sit in groups. At the centre of each group, place a pile of flash-cards with the numbers 1-10. Call out the numbers randomly, and students try to pick up the announced number first. The group that recognizes the most numbers fastest wins.

Strategy 2: Teach one grade while others work independently

It may be useful to decide on a time during the day to devote to each separate grade group. After a short period of teacher-led instruction, one group can be left with their peer tutor, or students can practice independently in their workbooks while you move on to work with another grade group. Your teacher-led activities can be rotated across your grades and groups as needed. To promote continuity in learning, it is helpful to remind your students at the beginning and end of each teaching session what they are doing and why.

Example: Using the above lesson on numbers as the whole-classroom introduction, you can work with Grade 1 first on the cardinal numbers 1-10, then move to Grade 2 and focus on the ordinal version of these numbers (first, second, third). If you have a Grade 3, you can later move to that group and work on related concepts such as single, double, and triple.

Strategy 3: Teach one subject to all grades and at varying levels of difficulty

This strategy allows you to group children of different grades, ages, and abilities together and teach them the same curriculum theme at the same time. You can first focus on common elements and then follow this with differentiated tasks and activities.

A few minutes of explanation and practice around the theme at the start of the lesson can get students of all levels thinking about and using the concepts and skills they will need. You can then direct more demanding questions at older or more able students and ask younger or less able students more supportive questions. In this way all students can participate at their own level and make some contribution to the lesson.

Strategy 4: Develop activities for non-taught groups

Higher grades or older students can sometimes be left on their own to investigate and gather information by themselves. This leaves you with

more time to work with students who need more support. You may have different expectations of the learning outcomes for non-taught groups. Some examples of activities for non-taught groups for different subject areas are presented below.

Example Activities for Non-taught Groups			
Step	Subject	Activities	Expectations
Step 1	Language (i) Vocabulary	Ask your students to go to the school garden. Before they begin to explore, explain what is expected of them when they come back: for example, to catalogue as many words and sentences they can think of while looking around the garden.	Students must find as many new words as possible and put them into sentences.
	(ii) Reading	Have your students settle in the reading corner to read through one or more books. Give them questions beforehand and ask them to find answers in the books. With the sentences your students prepared in the vocabulary lesson, they can make a text which can be used later as a reading text. Students can write down any new vocabulary they learn. You can also dictate the learned words or sentences back to your students.	Students learn to spell and gain new vocabulary. Students practice writing, reading and listening.
Step 2	Mathematics (i) Measurement	Ask the group to measure the distance from the classroom to another building in the village. Talk about metres, half metres, and centimetres. A demonstration lesson on multiplication tables can fit into this topic.	Students can learn both about the principles of measurement and the metric system as well as practice multiplication skills.
	(ii) Sets	Ask students to go outside and measure different parts of their bodies - legs, arms, feet, heads, etc. - and then create a chart of all their measurements to compare differences. Have the group identify colours of buses and cars and the number of people (men and women) in a certain part of the village.	Students learn more about measurement but also gain skills in making comparisons - "bigger than", "smaller than", etc. Students learn that different objects/ people form part of separate sets.

Step 3	Social Studies (i) Science (ii) Geography (iii) History	Ask the group to describe the usual weather in your village by season and different ways to measure the weather.	Students will understand local seasons, the principle of climates and the use of instruments to measure temperature.
Step 4	Creative activities	If you have access to paints, ask your students to mix different colours to see which new ones they can create. Ask students to draw a picture based on a particular theme they are studying; you can then display these in the classroom.	In such "free play" activities students will learn to be more creative and gain pride through the display of their work.

Strategy 5: Develop peer, cross-age and cross-grade teaching strategies

Cross-age tutoring is based on the pairing of students and is used extensively in most multigrade classrooms so that older children can help younger students with their lessons. The peer tutor begins by asking general questions to assess the younger student's understanding of the topic; then gradually moves on to more difficult questions. Peer tutoring has been found to be an effective strategy in multigrade situations as it trains students to use a sequenced series of questions and helps scaffold their learning to higher levels. This strategy works well for children with learning disabilities and other special education needs, children from ethnic or linguistic minorities, and children who have not gone through some kind of pre-school programme. Peer tutoring is used on a regular basis to reinforce concepts which you have already presented at the beginning of class or in a previous lesson.

Example: This strategy can be adapted by using a game format in which the class is divided into two teams. Each tutor-tutee pair is assigned to a team. The tutor asks a series of pre-determined questions and awards points for the tutee's correct answers. Each pair's points are totalled to determine the team score. This method allows for competition between teams, but not directly between pairs. Tutoring pairs and teams are changed on a weekly basis to ensure all students have the chance to be on a winning team.

Strategy 6: Relate learning with daily experience

Relating a topic you are teaching to your students' daily lives, traditions, and culture helps them understand a concept more clearly than any other mode of teaching. You may therefore want to enhance the curriculum by supplementing it with additional activities and learning tools which relate directly to the local environment. For example, the concept of money transaction in arithmetic can begin with a common introduction for all grades. The process of transaction can then be explained by using your country's notes and coins. You can do this by showing your students locally bought items, giving the cost of each item and asking individual students or groups to calculate what combinations of coins and notes could be used for that amount of money. You can extend this by introducing games or role plays based on giving and receiving correct sums of money. This can be successful as a multi-level technique in a multigrade situation by using daily experiences with different activities depending upon the age and maturity levels of your students. Some examples of relating learning with daily experiences and local culture include those from local festivals, traditional dress and music, eating habits, etc.

Examples for Making Teaching Closer to Your Students' Daily Experience

1: Local Costumes

Names of parts of the costume	Colours	Designs	Materials	Made by whom?	Worn on what occasion?

2: Traditional Folk Dances

Type of dance	Who dances it?	Which community dances it?	Performed on what occasion?	Comparisons with other cultures of the region/country

3: Festivals

Name of festival	Origin	Time of year	Place	Activities	Special costumes	Participants

4: Food

Name of the food	Ingredients	Nutritional value	Where are the ingredients found or cultivated?	Association with any festival/season

TEACHING IN YOUR STUDENTS' MOTHER TONGUE

Where permitted or encouraged by the national education system, and if you can speak the mother tongue of your students, it is very important to begin instruction and promote literacy in their mother tongue.

Evidence from around the world shows that children who gain essential literacy skills in their language of daily use (often by the end of Grade 3) can apply the skills they have learned to more easily become literate in your country's national language(s) and then in international languages. Because they are learning other subjects such as arithmetic, geography, and science in a language they speak every day, they also gain a strong foundation in the principles and practice of these subjects - something that is much more difficult to do when learning in a language they do not understand well.

Working in a mother tongue requires having materials in that language (which can often be developed with the help of the local community) and skills in using the mother tongue to teach the required curriculum and then to build a strong bridge to the national language. Even if you do not speak the language of your students well and even if they have different mother tongues, you can adopt strategies, such as using teaching assistants from the local community or dividing students into same-language groups (which is even easier in a multigrade classroom), to provide good quality education in their own language.

CREATING ACTIVE LEARNING STRATEGIES

In summary, the improvement of student learning is your central challenge as a multigrade teacher. Active, child-centred learning is the best way to achieve desired student learning outcomes - academic as well as social and psychological. You can promote active learning by making a few specific changes in your teaching methods, such as:

- ◆ placing children at the centre of your attention and helping them progress through their own milestones and stages of learning at their own pace and speed
- ◆ providing learning opportunities through multi-age and multigrade activities in the same room to ensure that each student participates in the learning process
- ◆ encouraging each student in a group to explore, ask questions, show inquisitiveness to learn something new, and learn by doing and through play
- ◆ building a culture of collective learning in the class by choosing activities that suit the composition and maturity of each group
- ◆ using flexible methods such as cooperative learning, peer tutoring, teacher-led instruction, and self-reading and study
- ◆ building a classroom environment filled with group activities, information sharing, and opportunities for individual learning through the classroom library and reading corners
- ◆ working out a detailed weekly, monthly, and yearly plan for scheduling activities, subjects, and teaching methods
- ◆ keeping a checklist to follow how students are spending their time during school hours and the activities that waste the most time
- ◆ linking all learning with competency-based assessment

A blue line-art illustration of five children of various heights and genders playing with several rectangular blocks. One child is jumping, another is standing on a block, and others are sitting or standing around them.

Assessing Learning and Teaching Performance in Multigrade Classes

As you know, the evaluation of the learning outcomes of the diverse students found in your multigrade classroom is not always easy. But assessment is essential to find out how well your students are performing and whether your teaching is going in the right direction. This section looks at two important uses of assessment: (i) *learner assessment*, and (ii) *assessment of your own teaching*.

FOCUSING MORE ON LEARNER ASSESSMENT THAN ON EVALUATION

As a multigrade teacher with students of many different ability levels, you must decide what information to collect on each learner's progress and how to collect it. Individual learner assessment is just as important as comparative evaluation across students. The latter is useful to evaluate one student's progress against his/her peers, but too much and too public evaluation around performance can lead to negative labelling of some students as "clever" and others as "slow".

Like all children, students in a multigrade classroom learn in a continuum, moving from easier to more difficult material and from simple to more complex learning steps. They follow a path of progress at their own pace. Since such self-paced learning, as an integral part of multigrade teaching, promotes social, emotional, physical, aesthetic, and cognitive development, one goal for you is to focus not only on cognitive/academic achievement (e.g. reading and writing skills) but also to consider psychomotor skills and the psychological and emotional development of your students.

Another goal you should have is to develop a positive attitude among students about teachers and about learning. You can do this by assessing and rewarding other aspects of your students' development such as

their willingness to assist in doing classroom tasks, share resources with friends, and organize their own work. These outcomes deal with attitudes, values and behaviours, but they are not easy to measure despite their importance.

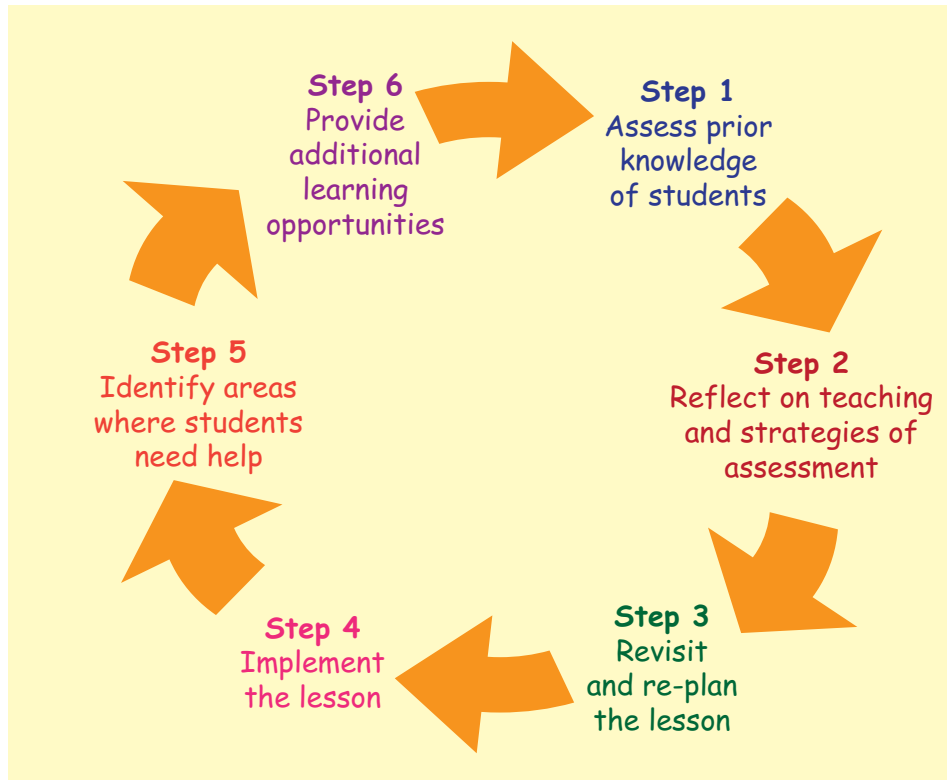
The assessment of students may be done daily or on a periodic basis depending on the size of the class and your capacity as a teacher to work with each student in the classroom individually. What is important is that assessment is not a one-time event but is cyclic and continuous. It must also be adapted to the type of activity on which your students are being assessed - group or paired work, individual work, etc.

It is always helpful to reflect on the purpose of assessment and to plan for it at four different times during the teaching and learning process:

- ◆ **before a new topic is introduced**, to determine what experiences or understanding students already have about that topic; this information will help you decide what new information they need to be taught
- ◆ **during a lesson**, to find out if your students are learning the concepts being taught; if you note problems for the class as a whole or for individual students you may be able to solve them during the lesson
- ◆ **at the end of a topic**, to assess mastery prior to progression to the next topic, decide if further remediation is required for some students, and provide feedback to you about your own teaching methods
- ◆ **at the end of a term or the school year**, to assess if students have retained their understanding of the lessons delivered

It is therefore important for you to adopt a cyclic process of assessment as illustrated in Figure 5. The process may begin with the identification of grade- and age-specific competencies expected to be mastered by your students.

Figure 5: Cyclic Process of Assessment



In a multigrade teaching situation, you will have to use several methods for assessing learner performance and learning outcomes:

- ◆ Individual assessment - select activities that help measure the learning of each student. This may include collecting basic information through administering a test, checking individual assignments and projects, using checklists, observing each student's activities and reading his/her written work, and keeping anecdotal records of each student's development. Keeping a portfolio for each student is an especially rich resource that will help you assess the progress of your students over time and maintain a more permanent record of their work.

- ◆ Group assessment - observe how well each group works as a team - who are the leaders, who needs encouragement to participate, who prevents others from taking part - and the quality of the group's results. What did each individual student contribute to the results and how?
- ◆ Self-assessment - ask your students about their favourite and most difficult subjects. What additional help do they think they need to do better?
- ◆ Peer assessment - ask the peer tutors you have selected about the progress each of the students they are working with is making. Should different peers be assigned to work with students who are having problems?

In addition to measuring specific learning outcomes such as reading and arithmetic knowledge, you may wish to observe and assess the following skills and attitudes:

- ◆ Reporting, narrating, drawing pictures, picture reading, filling in maps, etc.
- ◆ Listening, talking, expressing opinions
- ◆ Expressing oneself through body movements, creative writing, etc.
- ◆ Reasoning, making logical connections
- ◆ Questioning by expressing curiosity, asking questions
- ◆ Analyzing and drawing inferences
- ◆ Learning by doing
- ◆ Expressing concern and sensitivity towards students who are disadvantaged or have various kinds of disabilities
- ◆ Showing cooperation by taking responsibilities seriously and sharing and working together

PRACTICING SELF-REFLECTION ON YOUR TEACHING AND YOUR STUDENTS' LEARNING

Equally important to student assessment as a means to improve your teaching and develop new and better practices is your continuous and routine reflection on your own teaching skills, strategies, and methods - and on any other school responsibilities you may have. One way to do this is to keep a record of your teaching activities such as how you plan lessons, manage the classroom, schedule subjects, develop instructional resources, assign appropriate tasks to students, guide and counsel students with particular learning problems, and assist parents in monitoring the progress of their children. Periodically reflecting on how you carried out these activities and what kinds of results were achieved, especially as you go through another cycle of teaching, can be very useful.

Other sources of feedback on your teaching are also important. This may include assessment from your head-teacher/principal, your fellow teachers, and even informal feedback from your students - why not ask them what they like and do not like about the classroom environment and individual lessons?





Good Multigrade Programmes and Practices

Many examples of good multigrade programmes and practices are available around the world, including in Asia, and many have features which can be adapted to multigrade teaching contexts. Though these practices were mainly developed in response to country-specific attempts to address multigrade teaching, they do have important lessons that can be analyzed and then adapted to your local context.

ESCUELA NUEVA

The best-known and most enduring example is **Escuela Nueva** which originally began in Colombia and has now been adapted in many other countries in Latin America and elsewhere. It has several essential features:

- ◆ Teachers are facilitators to guide and orient learning
- ◆ Teaching strategies encourage active, creative, and participatory learning
- ◆ Students learn at their own pace using self-instructional materials
- ◆ There is no grade repetition; promotion to the next objective or grade is individual, progressive, and flexible
- ◆ Students have the freedom to study at school and at home at their own pace
- ◆ Self-instructional materials are shared among three students and are able to last for several years
- ◆ Active participation of students in school governance is encouraged (e.g. through student councils) to promote civic and democratic behaviour

- ◆ The content of the materials reflects the national curriculum and also includes regional and local adaptation
- ◆ Teacher training workshops are highly contextual and replicable

SCHOOL IN A BOX

The **Multi Grade Multi Level (MGML) Approach** in India reflects a variety of models adopted by schools under different kinds of private management which are committed to a qualitative improvement in the multigrade primary schools. MGML addresses issues in curriculum, teacher training and the development of teaching and learning materials, quality teaching in difficult situations and contextualization to local conditions.

One of the most innovative approaches developed by the Rishi Valley Institute for Educational Resources (RIVER) has been adapted in several states in India. RIVER started as an attempt to develop a set of materials appropriate to the language and local customs of the community. The content of the government textbook was reorganized into a set of activities which drew on local folk and oral traditions in order, for example, to help students learn to read, gain new vocabulary, and make calculations. The activities are arranged in five learning styles or steps - introductory, reinforcement, evaluation, remedial, and enrichment. The first is more teacher-led and the others are led by tutors, carried out in groups and done by individual students through independent learning. An educational kit developed by RIVER - School in a Box - has become a major innovation in teaching and learning materials for multigrade classes.

NO MORE SCHOOLS / IMPACT

In the Philippines, schools with one teacher handling more than one grade have been common at least since the 1920s. During the early 1970s the SEAMEO Regional Centre for Educational Innovation and Technology (INNOTECH), based in Quezon City, devised a radical approach to rural education. Known originally as the "no more schools" concept, it proposed

to replace schools, textbooks, teachers and grades with learning centres, self-instructional materials, peer tutor and community support and instructors responsible for the management of learning among groups as large as 150-200 students. Over time the concept became better known as **Instructional Management by Parents, Community and Teachers (IMPACT)**. The innovation began in the Philippines and Indonesia (PAMONG), spreading subsequently to Malaysia (INSPIRE), Jamaica (PRIMER), Liberia (IEL) and Bangladesh (IMPACT).

The original rationale was to improve rural education by devising a new delivery system with a more flexible schedule and lower student costs. Since teachers made up 80-90 percent of unit costs in conventional schools, such costs were reduced by increasing the student-teacher ratio and supplementing teacher supervision with assistance from students, parents, and community resources. Self-instruction, relying on programmed instructional materials, could be another means to reduce costs and, moreover, enabled greater flexibility in scheduling individual learning. Although there was no explicit reference to multigrade teaching in the rationale, many of the schools which were subsequently to participate in the innovative system were multigrade schools with fewer teachers than grades.

MULTIGRADE PROGRAM IN PHILIPPINE EDUCATION (MPPE)

Multigrade teaching as a Philippines national strategy to improve access to and the quality of primary schooling was formalized with the launching of the **Multigrade Program in Philippine Education (MPPE)** in 1993. The MPPE aims to improve quality by increasing teachers' abilities to work with more than one grade simultaneously through training and instructional materials. The programme works in five areas: curriculum and materials development, staff development, physical facilities, community support, and research, monitoring and evaluation. It has developed a guide for minimum learning competencies for multigrade classes, a budget of work and lesson plan for multigrade teachers to follow, a handbook for teachers with sample lessons, materials to be used at different grade levels within the same classroom and other instructional materials such as a 100-book library, drill cards, and other

teacher-made materials. Efforts have also gone into training in the form of a handbook for pre-school teachers and a workbook for pre-school children. Throughout the programme teachers build elements of the local area into the instructional materials used. The emphasis on local experience is continued by encouraging each student to report on individual and group investigations and by exhibiting examples of students' work throughout the school year.

A GRADED APPROACH TO READING

In Sri Lanka there is a highly developed system of education. Enrolment in the primary cycle is near universal. But several types of socio-economic disadvantage remain for which multigrade teaching is appropriate. Multigrade teaching is most likely to be found in remote rural areas where access is difficult, population sparse and the living conditions for teachers unattractive. These schools also often have high rates of student absenteeism, frequent changes in grade combinations and a lack of textbooks. One example of multigrade teaching in such schools is an initiative to support **multigrade classrooms in tea and rubber estates** which focus on the development of a graded approach to reading. This is a grassroots example of teachers and teacher educators working together to identify differences in the pace at which students in the same grades are learning. The realisation that additional reading materials can be developed at low or no cost and that supplementary story books can be made available on loan is transforming the work of teachers and the learning experience of students.

LEARNING AND TEACHING IN MULTIGRADE SETTINGS (LATIMS)

Another approach in both Sri Lanka and Nepal has been the development of teacher education models in the **Learning and Teaching in Multigrade Settings (LATIMS)** project. This has resulted in the adaptation of the complete curriculum in two subject areas for Grades 2-5 in Nepal and in one subject area for Grades 3-5 in Sri Lanka. Significantly, both exercises have been conducted as collaborations between curriculum developers and teachers. In both countries there

was a degree of resistance to the idea of curriculum adaptation from curriculum developers whose orientation was usually towards monograde classes. "Thinking outside of the box" and reconceptualising a new approach to suit the reality of the multigrade class and the needs of the multigrade teacher required creative thought and courage. This was achieved in both countries. The development of teacher education materials alongside the curriculum development exercise has had the advantage of bringing the most recent and innovative curriculum developments to the attention of all teachers and not only those who participated directly in the curriculum adaptation workshops, trials, and follow-up exercises.





Summary: Ten Lessons

These experiences in multigrade teaching help to reinforce the major lessons discussed above which should be useful to you, as a multigrade teacher, in ensuring the best quality learning for your students. These lessons include:

1

As a multigrade teacher, you should try first to **understand the diversity and complexity of your students** - by gender, age, family and socio-economic background, language, ability, and special education needs - and see this diversity not as a problem to be solved but as an opportunity to be used to produce better learning.

2

Given this diversity, you need to **personalize your teaching** (and eventually your assessment methods) to respond to the different backgrounds and learning styles/needs of each of your students. This includes identifying early on children who are at risk of failing and giving them the extra attention they need to make sure they succeed and stay in school.

3

You need to **make your classroom "child-friendly"**, especially for new students coming directly from their families to the school; this means not only teaching what needs to be taught but also ensuring that the classroom is healthy, welcoming, inclusive and protective of children of all different backgrounds and abilities and that your teaching is sensitive and responsive to the needs of both boys and girls and promotes student participation in the classroom.

4

If it has not already been done, you will need to **adapt the standard national curriculum** to both the local culture and context and to your multigrade situation. This may require breaking down the curriculum into themes that can be taught across grades while ensuring that students in each grade level learn what the system expects them to learn.

5

In implementing this adapted curriculum, you should try to **be creative in your management of the multigrade classroom**, arranging whole grades, mixed grades, large and small groups, pairs and space for individual work. This requires special attention to establishing routines for students to work and study independently through activity-based learning.

6

You need to **be flexible in your use of time**, moving from one kind of group to another and balancing the attention you give to strong students acting as peer tutors and weaker students needing extra attention.

7

You should try to **be innovative in the development and reproduction of teaching and learning materials** - use locally available resources and make them relevant to the local context and culture. As far as possible, you need to bring teaching closer to local conditions and available resources. The involvement of students from higher grades in designing workbooks is always helpful in making the curriculum more relevant to the local culture.

8

Where permitted and possible, you should **use the students' mother tongue as the medium of instruction**, ensuring initial literacy in that language (e.g. by Grade 3) and then, where appropriate, helping students transfer the literacy skills in that language to the national language(s).

9

Since you are often working in remote and isolated places, you should **take advantage of whatever resources there are around you** to help you in your work - your principal/ head teacher, parents and the local community, and other schools relatively close to your school which can form a cluster and share useful experiences, materials and lesson plans.

10

You must try to **master the other skills needed to help a small, remote, often poor (and poorly-supported) school succeed**. Multigrade teaching is a challenge in itself, but working with your teaching colleagues to make your small school “work” requires other skills as well: making do with limited resources and trying to raise more; carrying out a school self-assessment of its achievements and its needs and developing a school improvement plan; mobilizing support from impoverished and often disempowered and disinterested parents; and gaining the support of local community leaders - all of these are skills useful in schools with multigrade classrooms.

The Golden Rule:

“

Adapt the national curriculum to the context of the local community and of your multigrade classroom, and implement it flexibly, using a variety of classroom management and teaching strategies according to the backgrounds, learning styles and needs of your individual students.

”





Aikman, S. and Pridmore, P. 2001. Multigrade Schooling in Remote Areas of Vietnam. *International Journal of Education Development*, Vol. 21, No. 6, pp. 521-536. <http://www.vnseameo.org/zakir/MSRA%20in%20VN.pdf> (Accessed 30 Nov, 2012)

Bajracharya, R. and Bajracharya, H. 2003. *Multi-grade & Multi-class Teaching Practices in Nepal*. Kathmandu, Research Centre for Educational Innovation and Development (CERID). (Contribution presented during the development of the Asia Pacific Curriculum - UNESCO-IBE.) http://www.ibe.unesco.org/fileadmin/user_upload/COPs/Pages_documents/Resource_Packs/TTCD/6_3_3_CS_NPMultigradeMulticlass.pdf (Accessed 30 Nov, 2012)

Beneviste, L.A. and McEwan, P.J. 2000. Constraints to Implementing Educational Innovations: The Case of Multigrade Schools. *International Review of Education*, Vol. 46, No. 1/2, pp. 31-48.

Berry, C. 2001. Achievement Effects of Multigrade and Monograde Primary Schools in the Turks and Caicos Islands. *International Journal of Educational Development*, Vol. 21, No. 6, pp. 537-552.

Berry, C. [nd.] *Multigrade Teaching: A Discussion Document*. University of London, Institute of Education. <http://info.worldbank.org/etools/docs/library/94851/Multigrade%20Teaching%20-%20a%20discussion%20document%20by%20Chris%20Berry%20%28Anglais%29.pdf> (Accessed 30 Nov, 2012)

Berry, C. and Little, A.W. 2006. Multigrade and Multi-age Teaching in Classrooms in London, England. Little, A.W. (ed.) *Education for All and Multigrade Teaching: Challenges and Opportunities*. Amsterdam, Springer.

Beukes, F.C.G. 2006. *Managing the Effects of Multi-Grade Teaching on Learner Performance in Namibia*. M.Ed. dissertation, University of Johannesburg, South Africa.

- Birch, I. and Lally, M. 1995. *Multigrade Teaching in Primary Schools*. Bangkok, UNESCO Principal Regional Office for Asia and The Pacific. <http://bvirtual.proeibandes.org/bvirtual/docs/multigradeteachingprimaryschools.pdf> (Accessed 30 Nov, 2012)
- Blum, N. 2009. Small NGO Schools in India: Implications for Access and Innovation. *Compare*, Vol. 39, No.2. <http://content.ebscohost.com/pdf9/pdf/2009/8VUR/01Mar09/37139724.pdf> (Accessed 30 Nov, 2012)
- Blum, N. and Diwan, R. 2007. *Small, Multigrade Schools and Increasing Access to Primary Education in India: National Context and NGO Initiatives*. London, University of London, Institute of Education and National University of Educational Planning and Administration. (CREATE Pathways to Access, Research Monograph No. 17.) <http://sro.sussex.ac.uk/1865/1/PTA17.pdf> (Accessed 30 Nov, 2012)
- Cash, T. 2000. *Multi-Grade Teaching*. London, University of London. <http://www.ioe.ac.uk/multigrade> (Accessed 30 Nov, 2012)
- Colbert, V. and Harris, R. 1992. *Multigrade Education: The New Participatory School, Initiation and Orientation Course Manual*.
- Collingwood, I. 1992. *Multiclass Teaching in Primary Schools: a Handbook for Teachers in the Pacific*. Western Samoa, UNESCO.
- Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998a. *Module 2, Unit 4: Classroom Organisation*. London, Commonwealth Secretariat.
- Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998b. *Module 2, Unit 5: Classroom Management*. London, Commonwealth Secretariat.
- Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998c. *Module 2, Unit 6: Assessment and Evaluation*. London, Commonwealth Secretariat.
- Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998d. *Multigrade Teaching Programme. Module 3: Learning and Its Impact on Classroom Practice*. London, Commonwealth Secretariat.

Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998e. *Multigrade Teaching Programme. Module 4: Teaching Strategies for Multigrade Education*. London, Commonwealth Secretariat.

Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998f. *Multigrade Teaching Programme. Module 5: Timetabling and Scheduling*. London, Commonwealth Secretariat.

Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998g. *Multigrade Teaching Programme. Module 6: Classroom Management and Organisation*. London, Commonwealth Secretariat.

Commonwealth Secretariat, Caribbean Community Secretariat and Commonwealth of Learning. 1998h. *Multigrade Teaching Programme. Module 8: Measurement and Evaluation*. London, Commonwealth Secretariat.

Commonwealth Secretariat. 2005. *Resource Material for Multi-Grade Teaching: A set of 7 modules published in collaboration with the Association for the Development of Education in Africa (ADEA)*.

Constantinidi, A. and Tsolakidis, C. 2006. *ICT Reinforcing Teaching and Learning in Multigrade Schools*. <http://www.elearningeuropa.info/de/node/2578> (Accessed, 12 Dec, 2012)

Cornish, L. 2006. Parents' Views of Composite Classes in an Australian Primary School. *The Australian Educational Researcher*, Vol. 33, No. 2, pp. 123-142. <http://www.aare.edu.au/aer/online/0602h.pdf> (Accessed, 12 Dec, 2012)

Debbie, R. 1998. *Mixed-Age Grouping: What Does the Research Say, and How Can Parents Use This Information?* <http://www.kidsource.com/kidsource/content4/mixed.age.group.pn.html> (Accessed, 12 Dec, 2012)

Discussion led by Angela W Little on Teaching and Learning Strategies in Multigrade Classes. <http://ebookbrowse.com/moderationteaching-and-learning-strategies-in-multigrade-classes-doc-d420224461> (Accessed, 12 Dec, 2012)

Hargreaves, E. 1999. *Multigrade Teaching: One Response to Jomtien*. <http://multigrade.ioe.ac.uk/fulltext/fulltexthargreaves.pdf> (Accessed, 12 Dec, 2012)

Hargreaves, E. 2001. Assessment for Learning in the Multigrade Classroom. *International Journal of Educational Development*, Vol. 21, No. 6, pp. 553-560.

Hargreaves, E., Montero, C., Chau, N., Sibli, M. and Thanh, T. 2001. Multigrade Teaching in Peru, Sri Lanka and Vietnam: An Overview. *International Journal of Educational Development*, Vol. 21, No. 6, pp. 499-520.

Hayes, D. 1999. Organising Learning in Mixed Age Classes: A Case Study about a Multi-task Lesson. *Curriculum*, Vol. 20, No. 2, pp. 100-109.

Heeney, M. R. 1996. *The Implementation Process of Two Multigrade/ Multiyear Teams in Two Middle Schools in South Florida: A Cross-site Case Study*. Paper presented in the annual conference of the national Middle School Association, 23rd, Baltimore, MD, 31 October - 3 November, 1996. (Paper available: ERIC Document Reproduction Service No. ED 410066).

Higgins, C. 2007. *Improving Multigrade in Sub-Saharan Africa: A Toolkit for Policy Makers and Educators*. Washington, DC, World Bank.

Higgins, C. 2007. *Multigrade Teaching. A Viable Option for Sub-Saharan Africa?* Paper presented at the Development's Futures Conference, NUI, Galway, 24-25 November. (For further details, contact amulkeen@worldbank.org).

http://www.nuigalway.ie/dern/documents/62_cathal_higgins.pdf (Accessed, 12 Dec, 2012)

Higgins, C. and Schiefelbein, E. 2007. *Multigrade Teaching in The Gambia: A Case Study*. Washington, DC, World Bank.

Hopkins, D. and Ellis, P.D. 1991. The Effective Small Primary School: Some Significant Factors. *School Organisation* Vol. 11, No. 1, pp. 115-122.

Hussain, R. and Retallick, J. 2005. Teaching and Learning in Multigrade Classes. Retallick, J. and Farah, I. *Transforming Schools in Pakistan:*

Towards the Learning Community. Karachi, Pakistan, OUP.

Juvane, V. 2005. *Redefining the Role of Multi-Grade Teaching.* ADEA Working Group on the Teaching Profession at the Ministerial Seminar on Education for Rural People in Africa: Policy Lessons, Options and Priorities, hosted by the Government of Ethiopia, Addis Ababa, Ethiopia, 7-9 September 2005.

Kamat, K.N. 1998. *Management and Organisation of Learning in Multilevel/Multigrade Situations for School Effectiveness.* Paper presented in the Seminar on Studies on Learning Organisation, Community Participation and School Effectiveness at Primary Stage: International Perspective 1998 Conference, National Council of Educational Research and Training, New Delhi, India.

Khan, J.W. 2006. *School Improvement in Multigrade Situation (SIMS). An innovation of the PDCC.* Paper presented at the conference "Quality in Education Teaching and Leadership in Challenging Times", Institute for Educational Development, Aga Khan University, Karachi, 21-23 February.

Khan, J.W. and Khan, S.A. 2007. *School Improvement in a Multigrade Situation. An Action Research Carried out in Chitral-Pakistan.* <http://multigrade.ioe.ac.uk/fulltext/fulltextKhanandKhan.pdf> (Accessed, 12 Dec, 2012)

King, S. and Young, P. 1996. Opening the Door on Best Practice: Contrasting Teaching Styles in the Multigrade Classroom. *Education in Rural Australia*, Vol. 6, No. 1, pp. 28-36.

Kinsey, S. J. 2001. *Multiage Grouping and Academic Achievement.* (ERIC DIGEST EDO-PS-01-1)

Kishore, L. 2010. *Single Teacher Schools and Multi-Grade Teaching in Bangladesh.*

Lingam, G.I. 2007. Pedagogical Practices: The Case of Multi-class Teaching in Fiji Primary School. *Educational Research and Review*, Vol. 2, No. 7, pp. 186-192.

Little, A.W. 1995. *Multi-grade Teaching - A Review of Research and Practice.* (Education Research Paper No. 12, as part of occasional papers

on education brought out by the Education Division of the Overseas Development Administration, London.)

Little, A.W. 2001. Multigrade Teaching: Towards an International Research and Policy Agenda. *International Journal of Educational Development*, Vol. 21, pp. 481-497.

Little, A.W. 2004. *Learning and Teaching in Multigrade Settings*. Paper prepared for the UNESCO 2005 EFA Monitoring Report. <http://siteresources.worldbank.org/INTINDIA/4371432-1194542398355/21543231/LearningandTeachinginMulti-GradeClassrooms.pdf> Accessed 15 May, 2011.

Little, A.W. 2005. *Learning and Teaching in Multigrade Settings*. (Background paper prepared for the Education for All Global Monitoring Report 2005, The Quality Imperative, UNESCO.)

Little, A.W. 2006. *Education for All and Multigrade Teaching: Challenges and Opportunities*. The Netherlands, Springer.

Little, A.W., Pridmore, P., Bajracharya, H. and Vithanapathirana, M. *Learning and Teaching in Multigrade Settings (LATIMS): A final report to DFID*. <http://multigrade.ioe.ac.uk/fulltext/fulltextLATIMSFinalreport.pdf> (Accessed, 12 Dec, 2012)

Lockheed, M.E. and Versoor, A.E. 1991. *Improving Primary Education in Developing Countries: A Review of Policy Options*. Washington, DC, World Bank.

Lungwangwa G. 1989. *Multi-grade Schools in Zambian Primary Education: A Report on the Pilot Schools in Mkushi District*. (SIDA Education Division, No. 47.)

Mason, D. and Burns, R. 1996. Simply No Worse and Simply No Better May Be Simply Wrong: A Critique of Veenmans' School Conclusion about Multigrade Classes. *Review of Educational Research*, Vol. 66, No. 3, pp. 307-332.

Mathot, G. B. 2001. *A Handbook for Teachers of Multigrade Classes: Improving Performance at the Primary Level*. Volume One, edited by

June Cezair Wallace, Hope MC Nish and John Allen and Produced by June Cezair Wallace. Paris, UNESCO. <http://unesdoc.unesco.org/images/0012/001259/125919eo.pdf> (Accessed, 12 Dec, 2012)

McEwan P. 1998. The Effectiveness of Multigrade Schools in Colombia. *International Journal of Educational Development*, Vol. 18, No. 6, pp. 435-452.

McEwan, P.J. and Benveniste, L. 2001. The Politics of Rural School Reform: Escuela Nueva in Colombia. *Journal of Educational Policy*, Vol. 16, No. 6, pp. 547-559.

Meyenn, B., Squires, D. and Woolley, M. 1994. *Evaluation of the Multigrade Teaching Project in Vietnam*. Hanoi, UNICEF.

Miguel, M.M. Barsaga, E.B. 1997. Multi-grade Schooling in the Philippines, a Strategy for Improving Access to and Quality of Primary Education. Chapman, D.W., Mahlck, L.O. and Smulders, A.E.M. (ed.) *From Planning to Action: Government Initiatives for Improving School-Level Practice*. Oxford/ Paris, Pergamon/UNESCO.

Miller, B. 1989. *The Multigrade Classroom: A Resource Handbook for Small, Rural Schools*. Portland, OR, USA, Northwest Regional Educational Laboratory. (ERIC Document Reproduction Service No. ED 320 719).

Miller, B. 1991. *Teaching and Learning in the Multigrade Classroom: Student Performance and Instructional Routines*. (ERIC Identifier: ED335178.)

Miller, B. A. 1991. A Review of the Qualitative Research on Multigrade Education. *Journal of Research in Rural Education*, Vol. 7, No. 2, pp. 3-12. http://www.jrre.psu.edu/articles/v7_n2_p3-12_Miller.pdf (Accessed, 12 Dec, 2012)

Mulcahy, D. 1993. Developing a 'Distinctive Approach' for Multi-grade Classrooms: Some Preliminary Considerations. *Education Canada*, Vol. 33, No. 1, pp. 24-29.

Mulkeen, A. G. and Higgins, C. 2009. *Multigrade Teaching in Sub-Saharan Africa: Lessons from Uganda, Senegal, and The Gambia*.

Washington DC, World Bank. (World Bank Working Paper 173.) <http://www.scribd.com/doc/23947222/Multigrade-Teaching-in-Sub-Saharan-Africa-Lessons-from-Uganda-Senegal-and-The-Gambia> (Accessed, 12 Dec, 2012)

Mulryan-Kyne, C. 2004. Teaching and Learning in Multigrade Classrooms: What Teachers Say. *The Irish Journal of Education*, Vol. 35, pp. 5-19.

Mulryan-Kyne, C. 2004. *The Multigrade Classroom as a Context for Effective Teaching and Learning: Insights from Research on Teaching and the Irish context*. (For World Bank Colloquium on Multigrade Teaching and Learning, Dakar, 24-28 May).

Mulryan-Kyne, C. 2006. The Preparation of Teachers for Multigrade Teaching. *International Journal of Educational Development*, Vol. 21, No. 6, pp. 499-520.

The Multigrade Classroom, A Resource for Small Rural Schools, Book 2: Classroom Organization, NWREL, North Central Regional Educational Laboratory, Learning Centers, Classroom Organization I, Training Module. <http://educationnorthwest.org/resource/1680> (Accessed, 12 Dec, 2012)

Multigrade Teaching in Japan, Peru, Sri Lanka, and Vietnam. (4 views of multigrade.) <http://multigrade.ioe.ac.uk/fulltext/fulltextJapPerSriViet.pdf> (Accessed, 12 Dec, 2012)

Multigrade Teaching, Annotated Bibliography A-G. <http://multigrade.ioe.ac.uk/bibliography/annotated%20bibliography%20A-G.doc> (Accessed, 12 Dec, 2012)

Multigrade Teaching, Annotated Bibliography H-M. <http://Multigrade.Ioe.Ac.Uk/.../Annotated%20bibliography%20H-M.Doc> (Accessed, 12 Dec, 2012)

Multigrade Teaching, Annotated Bibliography N-Z. <http://multigrade.ioe.ac.uk/bibliography/annotated%20bibliography%20N-Z.doc> (Accessed, 12 Dec, 2012)

Muthayan, S. 1999. *Case Studies of Multigrade Teaching in India and Canada: Implications for Improving Primary School Effectiveness*,

International Seminar of Researches in School Effectiveness at Primary Level. New Delhi, National Council of Educational Research and Training.

Nielsen, D.H., Gillett, E. and Thompson, E. 1993. *Multigrade Teaching in Belize: Current Practice and Its Relation to Student Achievement.* Belize: Ministry of Education.

Pratt, C. and Treacy, K. 1986. *A Study of Student Grouping Practices in Early Childhood Classes in Western Australian Government Primary Schools.* Education Department of Western Australia.

Pratt, D. 1986. On the Merits of Multi-age Classrooms. *Research in Rural Education*, Vol. 3, No. 3, pp. 111-115.

Psacharopoulos, G., Rojas, C. and Velez, E. 1993. Achievement Evaluation of Colombia's Escuela Nueva: Is Multigrade the Answer? *Comparative Education Review*, Vol. 37, No. 3, pp. 263-276.

Quist, D. (ed.) *Resource Materials for Multi-Grade Teaching, ADEA Working Group on the Teaching Profession.* London, Commonwealth Secretariat.

Research Centre for Educational Innovation and Development. 2003. *Study on Multi-grade/Multi-class Teaching: Status and Issues.* Kathmandu, Tribhuvan University.

A Review on Multigrade Education: An In depth Review on the Effects of Multigrade Education. <http://nemed-network.org> (Accessed 6 September, 2010)

Stewart Resources Centre. 2007. *The Multi-age, Multi-grade Classroom: A Bibliography of Resources.* Canada, Saskatchewan Teachers' Federation.

Suzuki, T. *Multigrade Teaching Training in Nepal: Diversity of Practice and Impact of Training.* http://www.research.kobe-u.ac.jp/gsics-publication/jics/suzuki_16-3.pdf (Accessed, 12 Dec, 2012)

Tanzania. Ministry of Education. 2005. *Multi-grade Teaching Practice in Tanzania.* Bagamoyo, Tanzania.

Thomas, C. and Shaw, C. 1992. *Issues in the Development of Multi-grade Schools*. Washington DC, World Bank.

UNESCO. 1988. *Multiple Class Teaching in Primary Schools: A Methodological Guide*. Bangkok: UNESCO, Asia and the Pacific Programme of Educational Innovation for Development.

UNESCO. 1989. *Multigrade Teaching in Single Teacher Primary Schools*. Bangkok, UNESCO, Asia and the Pacific Programme of Educational Innovation for Development.

UNESCO. 1995. *Managing Schools for Better Quality: Multigrade Teaching and School Clusters*. Report of a Joint UNICEF/UNESCO/SEAMES Workshop, Bangkok, Thailand, 28 November - 2 December 1994. Bangkok, UNESCO, Asia and the Pacific Programme of Educational Innovation for Development.

UNICEF School-In-A-Box: Guidelines for Use. [nd.] http://www.unicef.org/supply/files/School_in_a_box_guidelines.pdf (Accessed, 12 Dec, 2012)

UNICEF. 1998. *An Evaluation of the Multigrade and Bilingual Education Project*. Hanoi, UNICEF.

USAID. 2003. *The Effects of Active Learning Programs in Multigrade Schools on Girls' Persistence in and Completion of Primary School in Developing Countries*. Project undertaken by Juárez and Associates, Inc. http://pdf.usaid.gov/pdf_docs/PNACS291.pdf (Accessed, 12 Dec, 2012)

Veenman, S. 1995. Cognitive and Non-cognitive Effects of Multigrade and Multi-age Classes: A Best Evidence Synthesis. *Review of Educational Research*, Vol. 65, No. 4, pp. 319-381.

Vietnam. Ministry of Education and Training, and UNICEF Vietnam. 1998. *Excerpts from Multigrade and Bilingual Classes in Vietnam as part of Teacher Training Modules on Methods and Techniques of Multigrade Teaching and Learning*. <http://www.unicef.org/teachers/resources/mod5.htm> (Accessed, 12 Dec, 2012)

Vincent, S. (ed.) and Ley, J. 1999. *The Multigrade Classroom: A Resource Handbook for Small, Rural Schools, Book 3: Classroom Management and Discipline, Rural Education Program*. (Based on the September 1989 publication of the same title written by Bruce A. Miller, Northwest Regional Educational Laboratory, Oregon.)

Virgílio, J. 2005. *Redefining the Role of Multi-Grade Teaching*. (Working Document, September 2005 in the Working Group on the Teaching Profession, Regional capacity Building Seminar on Education of Rural People in Africa, Addis Ababa, 7- 9 September 2005.)

Working Group on the Teaching Profession (WGTP). 2005. *Resource Materials for Multi-grade Teaching. Modules 1 - 7*. London, Commonwealth Secretariat.

World Bank. 2004. *Multigrade School Education in Uganda: A Draft Report of Evaluation*. <http://archive.dgroups.org/file2.axd/.../Case Study - Uganda Anglais .doc> (Accessed, 12 Dec, 2012)

Yusuf, A., Ajidagba, U. A., Olumorin, C. O., Oniyangi, S. O., Ahmed, M. A, Daramola, F. O. and Ibraheem T. O. 2011. Achievement Effects of Multi-grade Teaching on the Basic School Pupils in Patigi Emirate, Nigeria: Teachers' Perception. *Business Administration and Management*, Vol. 1, No. 5, pp. 144-148