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# **The Multigrade Classroom**

## **A Resource for Small, Rural Schools**



Book 1: Review of the Research on Multigrade Instruction



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 1: Review of the Research on Multigrade Instruction**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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# Acknowledgments

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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.

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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.

# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.

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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.



# Participants in the Multigrade Conference

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**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaumakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*WW Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age interactions through tutoring and shared discovery. Social competence develops

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for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In

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this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.



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# Review of the Research on Multigrade Instruction

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**A**ny indication that one is involved in an investigation concerning multigrade classes arouses intense interest among parents, even grandparents, of preschoolers and children of primary school age. Questions and comments abound. The matter is one of much significance and practical importance to them. It is also of considerable professional interest to educators and of theoretical as well as professional interest to educational researchers. For parents, the critical issue is whether the multigrade classroom will provide the kind of positive, satisfying, and productive social and learning experience they want for their child in school. For teachers and school leaders, there are multiple issues: whether enrollment distributions necessitate multigrade classes; the nature of parental, teacher, and school leader attitudes to multigrade classes; how best to organize and teach such classes in order to maximize student learning progress and social development. For researchers, the major focus for many years has been the question of whether student achievement differs in multigrade and single-grade classes.

The multigrade class structure is known by various names in different countries; these include “composite” or “combination” classes, “double” classes, “split” classes, “mixed-age” classes and “vertically grouped” classes (Veenman, 1995). It is defined as a class in which students of two or more adjacent grade levels are taught in one classroom by one teacher for most, if not all, of the day. Such multigrade classes are embedded within the traditional graded system: students retain their grade-level labels and are promoted through the school with their grade-level cohort (Mason & Burns, 1996; Veenman, 1995). For Mason and Burns and for Veenman, the definition also implies that grade-level curriculum and achievement expectations will be retained.

Both Veenman (1995) and Mason and Burns (1996) distinguish between the multigrade class and two other structures: the multiage class and the nongraded school. The latter two structures have an individualized, developmental focus and manifest in a continuous progress rather than lock-step, graded curriculum for class groups of students varying in age. Student groups remain with the same teacher for two or more years. Both researchers view the multigrade class structure as arising from administrative and economic necessity (unequal grade-level enrollment numbers, together with fixed staff-student ratios), in contrast to the multiage grouping, which is seen to result from a deliberate decision based on a particular pedagogical and philosophical approach.

This book presents a synthesis of research findings into the cognitive and noncognitive effects of multigrade and single-grade classrooms in elementary schools. Included are studies that involve the evaluation of the effects of multigrade or multiage grouping. Multigrade and multiage grouping have been clearly distinguished in order to avoid an “apples and oranges” problem at the level of the independent variable. The studies have



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also been grouped as relevant to two major dependent variables: (1) academic or cognitive achievement, and (2) noncognitive growth. The first area of relevance is further divided into the academic subjects addressed; for example, reading, language, mathematics, science, and social studies. The second area of relevance is further divided into personal adjustment, social adjustment, self-concept, attitudes toward school, and motivation.

## Methodological Inclusion Criteria

<b>Experimental and control groups</b>	All studies possessed both experimental (multigrade or multiage) and control (single-grade or single-age) groups.
<b>Standard measures</b>	In all studies, standard measures of academic achievement or nonacademic achievement were used. Grades and report card scores were not included as achievement variables because of their subjective nature. Noncognitive variables were excluded if they were not based on some objective standard of measurement.
<b>Comparability of samples</b>	Ideally, initial comparability of the experimental and control samples was established by means of matching of schools or classes, or matching of individual students within classes or schools.
<b>Duration of multigrade grouping</b>	In all of the included studies, the multigrade groups examined had existed for at least one year.
<b>Normality of sample</b>	All included studies involved samples of normal students in regular classes.
<b>Teacher training</b>	In all included studies, teachers in the experimental group had not been trained on the dependent measures.
<b>Number of teachers</b>	At least two experimental and two control teachers were involved in all of the studies included in this review.

# Quantitative Studies: Student Achievement

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In recent years some significant studies have been published that systematize and evaluate the research on the effects of multigrade classes on student achievement, as well as ones that investigate the processes that contribute to these effects. Veenman's (1995) best-evidence synthesis of research concerning the cognitive and noncognitive effects of multigrade and multiage classes was a thorough and well-documented meta-analysis and description of a large number of studies (45 of which were concerned with multigrade classes), drawn from a wide range of countries and nations across the world, both developed and developing.

Veenman found that there were no consistent differences in student achievement between multigrade and single-grade classes. The overall median effect size for cognitive outcomes was 0.00, while the overall median effect size for affective outcomes was + 0.10. On the basis of his findings, Veenman drew the conclusion that:

*... parents, teachers, and administrators need not worry about the academic progress or social-emotional adjustment of students in multigrade or multiage classes. These classes are simply no worse, and simply no better, than single grade or single-age classes (Veenman, 1995).*

Four factors were proposed by Veenman to help explain the finding of no difference in student achievement between multigrade and single-grade classes:

- Grouping alone is unlikely to have an effect; learning is more dependent on the quality of teaching than on organizational structure
- Bias in selecting more capable students into multigrade classes, if it occurs, would deplete the proportion of those students in single-grade classes, producing nonequivalent samples for comparison
- Teachers of multigrade classes are inadequately prepared for teaching such classes and do not have available suitable materials for their teaching
- Multigrade teaching is demanding and leaves teachers with little energy to pursue potentially more effective grouping strategies in their teaching, resulting in the use of the same practices as in single-grade classes

The quality of the research reviewed by Veenman was not consistently strong, and the justification for inclusion of some of the studies in his analysis is doubtful. Mason and Burns (1996), having themselves reviewed the research into the differential effectiveness of multigrade and single-grade classes, did not dispute Veenman's finding of nonsignificant differences in achievement and slightly more positive though nonsignificant social-emotional

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effects of multigrade classes. However, their conclusion was different; they claimed that multigrade classes have at least a small negative effect.

They argued that multigrade classes generally have better students and perhaps better teachers allocated to them (a possibility that Veenman acknowledged in his first paper [1995, pp. 327–328, 371], but subsequently claimed was not yet established [1996]). These factors should produce more positive outcomes for multigrade classes, both because multigrade classes would be systematically advantaged and also because single-grade classes would consequently be systematically deprived of better students and teachers. Why then are there multigrade classes found to have similar or slightly negative effects when compared to single-grade classes?

Mason and Burns (1996) asserted that the reason must lie in the more complex and difficult teaching situation that multigrade classes present, for example in terms of the greater workload and the need for more preparation time and better management skills (factors acknowledged by Veenman [1995, 1996]), together with a consequent increase in teacher stress.

*Teachers are therefore faced with delivering two different curricula to students of twice the age range in the same amount of time-factors, which make these two structures radically different. Our question is, why wouldn't we expect multigrade classes to be more difficult for teachers and result in different and less effective instructional practices? (Mason & Burns, 1996)*

In their view, lower quality, less effective teaching is characterized by less instruction time per grade-level group, less time to assist individual students and meet their needs, and reduced curriculum coverage, especially in areas beyond the basic skills.

Mason and Burns argued that the effects of lower quality instruction in multigrade classes are offset by the better students and teachers allocated to them, resulting in no significant achievement differences between multigrade and single-grade classes. They also argued that instead of eliminating the potential negative effects of multigrade classes on student achievement, the assignment of better students and teachers to these classes actually masks these effects because it diminishes the quality of students and teachers in single-grade classes in the same school. The lower achievement outcomes of the disadvantaged single-grade classes are the ones with which multigrade outcomes are compared.

The Mason and Burns case rests to a large extent on the question of whether there is a student and teacher selection bias in favor of multigrade classes. It is somewhat ironic that in a study of California multigrade classes conducted by Mason and Burns (1995), there is evidence that major administrative constraints prevent many principals from purposeful placement of students in multigrade classes.

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In one of the largest matched-equivalent studies Rule (1983) examined the effects of multigrade classes on student achievement in reading and mathematics in grades 3–6 in Arizona. Each multigrade class was formed from students at two consecutive grade levels. Three grouping patterns were studied: multigrade classes, single-grade classes in multigrade schools, and single-grade classes not in multigrade schools. In addition, the achievement levels of students in differing ability groups were analyzed. Three types of placement in multigrade classes were distinguished: high placement, average/high placement, and average placement. Multigrade classes with high-achieving students included students from the upper third in academic achievement, which was primarily a measure of reading achievement for both grades. For example, high-achieving second-graders were placed with high-achieving third-graders. A multigrade average/high class contained students from the middle and upper thirds in academic achievement in both grades. A multigrade average class combined average students from the lower grade with average students from the upper grade. The districts under study were forced to use multigrade classes in order to economize and to equalize class loads. Overall, the multigrade classes did not appear to affect reading and mathematics achievement negatively (total ES = + .01). The average/high placement appeared to be best for all grades for reading and for grades 4–6 for mathematics.

In a carefully matched study, Stone (1987) examined the possible effects of multigrade class placement on mathematics, reading, language, science, and social studies achievement in a large suburban school district in the United States. The multigrade classes were formed as a result of unequal enrollments and contained students from grades 2–3. The results showed no significant differences between the multigrade students and the single-grade students in overall achievement (total ES + .20).

Kral (1995) examined the effects of multigrade versus single-grade classes on mathematics, language, and reading performance of second-, fourth-, and sixth-grade students in Denmark. The achievement gains of students in small schools (fewer than 110 students) versus large schools (more than 250 students) were of particular interest in this study. The small (urban and rural) elementary schools instructed their students in multigrade classes encompassing two or three grade levels, while the large schools instructed their students in single-grade classes. As in the study by Brandsma (1993), a multigrade approach was used and, for the purposes of the present review, the data were reanalyzed using ANOCA with pre-achievement, IQ, and socioeconomic status as covariates. No systematic differences were found between the combination and single-grade class (total ES = -.06). Also, examination of teacher questionnaires and logs revealed no differences in the instructional time devoted to language, mathematics, and reading. The number of years spent in multigrade classes was not found to be associated with differences in achievement.

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Barbara Pavan (1992), a researcher and professor of educational administration at Philadelphia's Temple University, chose 64 studies conducted after 1967 for her review. Seven descriptors were used to search for the studies: nongraded, continuous progress, multiunit, individually guided education, multigrade, ungraded, and mixed age. To be included in this review, students in graded and nongraded schools with similar populations had to be compared using standardized test measures, or nongraded students had to be tested before and after the implementation of a nongraded program. Accepted for analysis were elementary school studies conducted in the United States and Canada for at least one academic year. The studies included all subject areas and covered more than one classroom.

Standardized tests were used in 57 of the studies, and the studies usually reported data from one year. Fifty-two (91 percent) of these studies indicated that for all comparisons, the multigrade groups performed better than (58 percent) or as well as (33 percent) the graded groups on measures of academic achievement. In only 9 percent of the studies did the students perform worse. It seems rather remarkable that pupils in multigrade schools scored well. Multigrade schools respond to individual differences by adjusting curriculum and thus may not cover what traditional textbooks do. As such, multigrade students may not be exposed to all the material that single-grade students cover. Yet, multigrade students overwhelmingly performed as well as or better than single-grade students on achievement tests emphasizing mastery of content that is generally the primary focus of the multigrade school.

### **Longitudinal studies**

While most of the research studies reported data from one year, 17 studies presented data over a number of years. In those studies, students completing multigrade primary programs had higher academic achievement than those in single-grade schools. More pupils attending multigrade primary schools started fourth grade with their entering class than did children from traditional grade-designated classrooms. This happens because there is no retention in a primary program. Students in multigrade intermediate programs had higher or similar academic achievement, more positive attitudes toward school, and similar self-esteem than those in single-grade programs.

Seven studies compared students who had spent their entire elementary school years in the same multigrade school with those who spent the same years in a traditional single-grade school. Those studies that reported academic achievement found superior performance by multigrade students.

### **At-risk students**

In 18 of the research reports, data were analyzed for various populations—Black students, underachievers, students of low socioeconomic status, and boys, who seem to experience more difficulty in the early years of learning and are often considered at risk. With the exception of one study, boys in multigrade schools scored better on achievement tests than boys in single-grade schools.

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In a 1992 review of research presented at the American Educational Research Association Conference on the achievement effects of the nongraded elementary school, Robert Guitierrez and Robert Slavin had findings consistent with those of Barbara Pavan. In addition, they also compared effect sizes for each study to characterize the strength of the effects, and broke the study into four main categories according to program characteristics. Very different effects were found according to these characteristics. The most positive achievement effects were for the simpler forms of nongrading generally evaluated during the 1960s, early in the nongraded movement. They found a median effect size of + .46 for programs in which only one subject (almost always reading) was nongraded. These programs strongly resemble the Joplin Plan, cross-grade grouping for reading. They also calculated a median effect size of + .34 for nongraded programs that incorporated multiple subjects but still primarily involved cross-grade grouping, not other elements.

In 1970, as the multigrade programs became more complex, they began to incorporate individualized instruction, and to become more like open schools. Thus, the achievement effects began to be much smaller. For programs incorporating individualized instruction, they found a median effect size of essentially zero (+ .02). Effects of individually guided education were only slightly more positive (ES = + .11).

In conclusion, Guitierrez and Slavin's research suggests that the effectiveness of multigrade elementary programs depends in large part on the features of the program, especially the degree to which nongrading is used as a grouping method rather than as a framework for individualized instruction. It is hard to know how relevant these findings are to the conditions of today, when curriculum and instruction are changing rapidly. Yet, at least they provide a cautionary note.

In a similar study by Barbara Nye (1993), a senior research scientist and executive director of the Research and Policy Center on Basic Skills at Tennessee State University in Nashville, 1,500 Tennessee students from kindergarten through fourth grade in multigrade classrooms were tracked. In the seven schools that participated, children worked in small, flexible groups that were mixed in terms of age and ability. Students progressed at their own speed, and the learning was more hands-on and less reliant on textbooks than in traditional classrooms. Two years into the study, Nye stated that her analysis showed that students were doing as well or better in terms of both academics and self-concept (Viadero, 1996).

Based on current and extensive research on multigrade instruction, three states have already mandated that the primary schools become nongraded. Kentucky, Mississippi, and Oregon have mandated multigrade groupings at the primary level (Gutloff, 1995), and several other states are currently exploring the idea.

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Kentucky issued its Education Reform Act, which mandated multigrade primary schools, in 1990. At the time Kentucky issued the Kentucky Education Reform Act, it was dealing with failing school systems. The Kentucky Department of Education found that by fourth grade, more than 20 percent of its primary population had been retained. It also found that it was not uncommon for schools to have a 25 percent dropout rate (Steffy, 1993). The department of education felt that drastic measures needed to be taken. This meant researching and revamping the Kentucky education system. The Kentucky Department of Education, after a great deal of research, issued a primary school position statement as follows:

*An appropriate primary program for all children recognizes that children grow and develop as a "whole," not one dimension at a time or at the same rate in each dimension. Thus, instructional practices should address social, emotional, physical, aesthetic, as well as cognitive needs. The primary program flows naturally from preschool programs and exhibits developmentally appropriate educational practices. These practices allow children to experience success while progressing according to unique learning needs and also enables them to move toward attainment of the educational goals and capacities of the Kentucky Education Reform Act in an environment which fosters a love of learning (Steffy, 1993).*

The Kentucky Education Board decided that the best way to achieve this was through multigrade instruction. At the time the Kentucky Education Reform Act went into effect, the secondary schools were unaffected. They felt they first needed to study how these transformations of education would affect the primary and middle school before making changes to the secondary schools.

What does the research that Kentucky and other states looked into say about multigrade classrooms? There still seem to be many conflicting ideas about the benefits of multigrade instruction. However, most of the research does point to some very positive benefits of multigrade practices, if they are dealt with in the true sense of the word. In Kentucky, results from the state's testing program are in after three years of the mandated multigrade classrooms. The tests show that fourth-graders' reading and writing scores are improving more rapidly than those of eighth- and 12th-graders. Of these three age groups, only the fourth-graders have been legally required to be taught in multigrade classrooms (Viadero, 1996).

The University of Louisville's Center for Gifted Students also did a study comparing the achievement of four Kentucky primary school multigrade classes with students in out-of-state, traditional, one-grade settings. Researchers tried to match these classes geographically and economically. The study found that 20 percent of the students in the Kentucky classrooms significantly outscored the out-of-state students on standardized tests in four areas: word identification, reading comprehension, mathematical calculation, and mathematical problem solving (Viadero, 1996).

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## The Victorian Quality Schools Project

**T**wo research questions provided the focus for the Victorian Quality Schools Project (VQSP), a large research-and-development project undertaken in Victoria, B.C., from 1992 to 1995.

- What are the characteristics of schools in which students make rapid and sustained progress in literacy (English) and mathematics, after adjusting for their intake factors and initial levels of achievement?
- What are the characteristics of schools in which there are positive student attitudes and behaviors, positive perceptions by teachers of their work environment, and high levels of parent participation and satisfaction with their child's schooling?

Details of the longitudinal quantitative study and its results may be found in Rowe, Hill, & Holmes-Smith, 1994, and Rowe, Hill, & Holmes-Smith, 1995.

The study was based on a two-stage stratified probability sample of schools in the three educational sectors in Victoria: government, independent, and Catholic. Schools were randomly selected at the first stage with probability proportional to their enrollment size; at the second stage, the entire cohorts of students in grades K, 2, 4, 7, and 9 in each of the selected schools were included in the sample. Repeated measures were obtained on these five-year-level cohorts over a three-year period, resulting in student data for each of the compulsory years of schooling. In the first year of the study, useable data were obtained from 90 (including 59 primary schools) of the 96 schools that had initially agreed to participate, with an achieved sample comprising 13,909 students and 931 teachers. A student sample attrition rate of about 10 percent occurred between 1992 and 1993, with a subsequent further loss between 1993 and 1994 of 8.5 percent.

The full database for the project is extensive; variables measured include students' achievement and value-added progress in literacy and mathematics, home background characteristics, student behavior, student attitudes and opinions, classroom organization, teacher participation in professional development, parent opinion, teacher affect and perceptions of the work environment, and (in 1993 and 1994) aspects of leadership. The results obtained from statistical analysis of the quantitative data enabled some generalized models of teacher and school effectiveness to be developed.

A qualitative, follow-up case study was undertaken of selected VQSP schools in order to "validate" several aspects of the generalized models concerning teacher effects on student learning, attitudes, behavior, and leadership effects on teacher attitudes, perceptions, and effectiveness, as well as to illuminate the processes that might be in operation. Because



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the quantitative study had produced an interesting and puzzling result in relation to student achievement in multigrade classes, this became one of the aspects pursued in the qualitative study. The two relevant research questions were:

- Does class composition based on more than one year level have a negative effect on student progress in English and mathematics?
- Does differentiated teaching reduce the negative effect on student progress in English and mathematics of belonging to a class composed of students at more than one year level?

The intention was to explore teacher and school leader understandings and experiences of multigrade classes to see whether potential explanations might emerge, which could then be tested in subsequent quantitative research.

A sample of six primary schools was selected from among those primary schools that had participated in the VQSP. The qualitative study was confined to primary schools for two reasons: First, some of the most interesting and important findings of the VQSP related to the primary school; and second, time/cost demands of the case study approach precluded the investigation of a sample large enough to include both primary and secondary schools. Selection of the six schools was based on schools' mean value-added learning progress scores in English and mathematics for the years 1992–93 and 1993–94. Two schools were selected that had consistently high mean achievement scores, two with consistently low mean scores, and one with consistently middle-level mean scores. The case study coordinator and fieldworkers were blind to the previous performance of the schools. The sample comprised schools from two systems (government and Catholic), from a range of locations (urban, outer urban, and semi-rural), and schools ranging in size from small (125 children, eight staff) to large (525 children, 27 staff).

In each school, four school leaders (principal, assistant principal, and the two staff members holding the next most senior positions) and four teachers (teachers of the Year 3 and Year 5 classes that formed the student sample) were interviewed. Semi-structured interview schedules included questions relating to the three main aspects of multigrade and single-grade classes: policy and practice regarding multigrade classes and their composition, perceptions of the relative ease or difficulty of student learning in multigrade classes, and teaching/learning strategies used in multigrade classes.

Interview responses were transcribed (not verbatim) from the tape recordings and, following the methodology of Miles and Huberman (1994), were used to establish within-site matrices relating to each research question and, subsequently, across-site matrices.

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## Results

### The quantitative study

A multivariate, multilevel model of student progress in literacy (adjusted for grade level and prior achievement) was developed based on the 1992–93 data. It revealed, among other things, a strong, direct negative effect of being in a multigrade class. The standardized coefficient for multigrade class in 1993 was  $-0.271$ , statistically significant beyond the  $p < .05$  level by univariate two-tailed test. In mathematics the effect, although negative, was not significant. In contrast to the 1993 results, the effect of multigrade class on students' learning progress in 1994 was not significant, though again still negative. Detailed information about the intricate and interesting multilevel, multivariate modeling in which these results are embedded may be found in Hill and Rowe (1998).

Why was the effect so short-lived or, possibly, so unstable? The suggested explanation given was that:

*... extended discussions were held with all participating schools following the finding of a negative effect at the end of 1993 and that as a result, schools closely examined teaching practices in multigrade classes with a view to identifying ways in which they had become less effective than single-grade classes (Hill & Rowe, 1998, p. 326).*

It was also pointed out that the 1994 results were more in line with recent research literature, such as the results of the meta-analysis reported by Veenman (1995). For schools that must establish multigrade classes, it is not sufficient to know whether or not research results in general show a significant or nonsignificant negative effect on learning progress. As indicated earlier, many teachers prefer not to teach multigrade classes and, in general, parents do not wish to have their children taught in multigrade classes. Regardless of whether these preferences are justified in terms of research results about student learning, schools experience the pressures arising from them. Schools participating in the VQSP needed to understand the explanation for the short-lived or unstable effect of multigrade classrooms on student learning progress found in the VQSP data. The case studies offered the opportunity to explore school perceptions and understandings.

In contrast to the sophisticated statistical analyses on which the results of the quantitative phase of the VQSP are based, the qualitative results are based on the conceptual analysis of the perceptions, preferences, opinions, and knowledge communicated by individuals during case study interviews. The results are expressed in the form of category content, frequencies, and percentages. It is noted that the results relating to specific issues were at times based on a relatively limited sample and on perceptions rather than observations of actual practice, since the purpose of this phase of the study was to develop potential understandings and explanations of processes that could be tested quantitatively at a future time. The results are not necessarily representative of Victorian schools.

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**The qualitative study**

The complexity of multigrade instruction is even more pronounced in developing nations. In 1988, United Nations Educational, Scientific and Cultural Organization (UNESCO) held a conference with representatives from India, Korea, Maldives, Nepal, Thailand, Philippines, Sri Lanka, and Indonesia. The conference focused on innovative approaches to teaching disadvantaged groups and teaching in the multigrade classroom. The problems and learning difficulties created by multigrade instruction were nearly similar for each country. Differences primarily related to financial, geographic, and demographic variables.

Multigrade classes in these countries tend to have large numbers of students and few teachers. The most common pattern of organization is the two-grade combination class. However, three or more grades per classroom were common to all countries. Of the eight countries represented, none indicated they had “single-grade” schools with more than four grades. For example, an individual teacher may have a classroom of 30 fourth-graders and 27 fifth-graders or a classroom of 35 students in grades 3–6. Teachers in these situations face a formidable teaching situation.

During the conference, five general problem areas emerged (UNESCO, 1988):

1. Inadequately trained teachers
2. Scarcity of varied levels and types of materials
3. Lack of flexible and special types of curriculum organization for multigrade classes
4. Inadequate school facilities
5. Lack of incentives for teachers of multiple classes

Similar to preservice training in the United States, all countries participating in the conference reported that the teacher preparation for working in multigrade classrooms was identical to that provided for teachers of single-grade classrooms. In other words, individuals going into teaching were not prepared for teaching multigrade classrooms.

Ironically, the concerns and depiction of problems in these developing countries echo many of the concerns voiced in the United States and Canada by multigrade classroom teachers and rural educators. The most prominent similarities are the need for curriculum and program modifications that reflect the culture of the local community, and the needs of students within the demands created by the multigrade organization. In this regard, two recommendations emerged from the conference.

First, curriculum needs to be restructured so that it is community based. UNESCO (1988) concluded that the environment in which the community lives, the history and culture, and the utilization of skilled

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persons in the community for improving the quality of education should be emphasized.

Second, innovative programs have a difficult time because the existing educational system is traditional, and this constrains perceptions of what may be possible. According to UNESCO (1988), the four walls of the classroom and the long periods demanded by programs in different countries somewhat inhibit and restrict the child's activities. Outdoor activities should be encouraged and experiences outside the classroom should be given a place in the curriculum.

Currently, the Education and International Development (EID) Group at the Institute of Education, London University, is carrying out research designed to raise awareness among policymakers, planners, and practitioners of the extent, problems, and needs of the multigrade teaching and learning environment. As the research proceeds, new findings will be posted on their Web page ([www.ioe.ac.uk/multigrade/](http://www.ioe.ac.uk/multigrade/)).

The project's objectives are to:

- Describe the extent of multigrade practice and the associated problems in Peru, Sri Lanka, and Vietnam
- Describe in detail how teachers currently organize teaching and learning in multigrade primary schools
- Conduct an intervention study with teachers on the organization and management of the multigrade classroom
- Make recommendations on multigrade teaching policy and practice

The project duration is from September 1998 to September 2001. In September 1999, the first workshop was held in the United Kingdom. The whole research team shared experiences, research findings, and expectations with each other, and contributions were made to the Oxford Conference on Education and Development as well as visits to multigrade schools in Wales. In September 2000, the researchers will reconvene in Vietnam and Sri Lanka. Research related to each of the three countries is ongoing. A profile of each follows.

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## Multigrade Teaching in Peru

**C**urrently, Peru has approximately 21,500 primary multigrade schools, 96 percent of which are located in rural areas. In terms of teachers, 41,000 teach in rural primary schools with multigrade classrooms, representing 69 percent of the total rural teaching force. Most of the schools in the countryside are multigrade (89 percent), which testifies to the importance of this type of school for improving the educational level of the rural population.

Among the most important characteristics affecting education are:

- The dispersion and isolation of the rural population.
- The poverty of the villages (60 percent of the population in rural areas are poor and 37 percent live in situations of extreme poverty).
- The family economy, which requires and includes children's work, as members of the family.
- Linguistic and cultural diversity (Spanish, Quechua, and Aymara are spoken as well as approximately 40 Amazonian languages). However, despite this diversity, the language of school is Spanish, and bilingual education programs have very limited coverage.
- In rural areas children begin school late, have a high rate of repetition, have periodic interruptions in their studies, and so forth, all of which increases the heterogeneity of the multigrade class.

The schools have severe deficiencies in infrastructure, access to services, availability of classroom furniture, equipment, and materials for teaching, and educational support. The teachers live in precarious conditions (no electricity, pure water, furniture, or adequate space in which to prepare their classes or to cook food); they have scarce incentives (a bonus of \$13 per month), and scarce support and attention from high-level offices. Formal teacher training does not instruct teachers in multigrade methodology, and often teachers do not speak the students' language.

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## Multigrade Teaching in Sri Lanka

**M**ultigrade teaching in Sri Lanka is common. It is common in rural and plantation schools where there are very few human and physical resources. A range of reasons for multigrade teaching could be identified in the Sri Lankan context, the most significant reason being nonavailability of one teacher per grade in these schools. The difficulty in access, sparse pupil populations that restrict the appointment of one teacher per grade, and difficult living conditions are the major factors contributing to teacher scarcity. Most of these schools have student numbers ranging from 50 to 150. According to the latest school census data by the Ministry of Education, there are 1,252 schools out of the 10,120 schools in Sri Lanka that have fewer than three teachers. Even the schools in urban areas face the challenge of organizing the teaching-learning situations similar to a multigrade setting during some parts of the day or during some days for various reasons (such as teacher absenteeism, teachers attending inservice training sessions, and so forth).

The national primary school curriculum is organized toward teaching in single-grade schools. Teachers in multigrade classrooms face the difficulty of organizing the national curriculum to suit their teaching and learning needs. Teachers are not given training to address such situations, as there is no provision in the teacher education curriculum for multigrade teaching methodology. Thus, the teaching in these schools is of very low quality. The student dropout rate is very high in these schools. Since the 1980s, the Department of Primary Education has attempted to try out multigrade teaching strategies in some selected schools under the UNICEF-assisted program for quality development of primary education. Very little research has been conducted on multigrade teaching in Sri Lanka.

## Multigrade Teaching in Vietnam

**T**here are many forms of multigrade classes in Vietnam, with two, three, four, or five different levels in any one class. So far, multigrade schools are quite widely used in ethnic minority areas with the purpose of providing primary education to disadvantaged children by bringing schools closer to communities where children live. Currently there are 2,162 primary schools with multigrade classes, accounting for 1.8 percent of total primary schools, and there are 143,693 students learning in multigrade classes, accounting for 1.38 percent of the school population.

Some problems include:

- There is a serious shortage of teachers, especially skilled teachers for multigrade teaching.

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- Teachers of multigrade classes are working in difficult and isolated conditions.
  - The training of teachers for multigrade classes does not meet the requirement in either quality or quantity.
  - Teaching methods of the ethnic minority schools are very poor and unsuccessful. Students are not encouraged to be involved actively in the teaching-learning process.
  - Most of the multigrade schools lack textbooks, guidebooks, and reference materials for students and teachers. Teaching equipment is very simple. Many multigrade classes are in very bad condition.
  - Pupils face language barriers in learning and regular interruption in their education.

# Quantitative Studies: Student Attitudes

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**M**any affective gains have also been documented in multigrade research. Students show increased self-esteem, more cooperative behavior, better attitudes toward school in general, increased pro-social (caring, tolerant, patient, supportive) behavior, enriched personal relationships, increased personal responsibility, and a decline in discipline problems (Anderson & Pavan, 1993; Gutierrez & Slavin, 1992; Mackey, Johnson, & Wood, 1995; Miller, 1993; Pratt & Treacey, 1986; Stone, S.J., 1995; Uphoff & Evans, 1993). For example, preliminary results of an investigation by McClellan and Kinsey (1996) suggest that multigrade grouping helps children develop social skills and a sense of belonging. These affective gains are due in part to the fact that competition is minimized as children progress at their own pace and individual differences are celebrated (Anderson & Pavan, 1993; Kral, 1995; Stone, S.J., 1995). Older students in particular develop mentoring and leadership skills as a result of serving as role models and helping the younger children (Nye, 1993; Stone, S.J., 1995).

In her research, Barbara Pavan included a mental health component in 42 of the studies. These measures presented data on school anxiety and other attitudes toward school, self-esteem, and self-concept. While the results on school anxiety were unclear, pupils in multigrade classrooms had more positive attitudes than those in single-grade classrooms, although they were likely to laugh more and were less likely to raise their hands to get permission to speak. Students in multigrade classrooms scored higher than single-grade students on the Coopersmith Self-Esteem Inventory, except in one study with no significant differences. The same pattern was noted in studies that used the Piers-Harris Children's Self-Concept Scale.

Overall on mental health and school attitudes, 52 percent of the studies indicated multigrade schools were better for students. Forty-three percent indicated single and multigrade schools had a similar influence on students. Only 5 percent found multigrade worse than graded schools. Students in multigrade schools were more likely to have positive self-concept, high self-esteem, and good attitudes toward school than students in single-grade classrooms.

On mental health measures, students from multigrade settings felt more positive or the same as graded students. After five years in one multigrade, open-space program, significantly fewer multigrade students were referred for discipline in junior high school.

Underachievers in multigrade schools had better self-concept, attitudes toward school, and academic achievement than underachievers in graded schools. Students of lower socioeconomic status also showed greater academic achievement when placed in multigrade schools.

Kathleen Cotton, a researcher funded by the U.S. Department of Education's Office of Educational Research and Improvement, researched

## **Longitudinal studies**

## **At-risk students**



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several educational studies in regard to developmentally appropriate practice and multigrade education. This included a 1993 analysis of 46 documents. Nine of the documents dealt with research on child development and learning; 11 focused on critiques of graded programs, descriptions of nongraded programs, and obstacles to implementing nongraded programs; and 26 reported the results of empirical research on the effects of nongraded grouping. She found that in general, the empirical research supported the use of nongraded programs. Cotton (1993) pointed out that most of the studies found that achievement in multigrade classrooms appeared to be no different than achievement in a single-grade classroom. The big differences were in attitude, behavior, social skill development, leadership skills, and parental attitudes. The studies that Cotton looked at all pointed to the multigrade classroom as providing significantly more positive outcomes. In addition, Cotton found that multigrade arrangements lend themselves to integrated curriculum, cooperative learning, cross-age tutoring, and learning in a more naturalistic setting.

Variation in grades, time of year, quality of instruction, and socioeconomic status, to mention only a few key variables, mediate student perceptions. Educational researchers studying student attitudes often have difficulty setting up studies where these variables can be adequately controlled. One compensating strategy is the aggregation of studies across setting and time. Practitioners can have greater confidence when many studies indicate similar results.

Viewed as a whole, the studies presented clearly indicate that students in multigrade classrooms tend to have significantly more positive attitudes toward themselves and school. A trend toward more positive social relationships is also indicated.

## Summary

**C**learly, these studies indicate that being a student in a multigrade classroom does not negatively affect academic performance, student social relationships, or attitudes. In terms of academic achievement, the data clearly support the multigrade classroom as a viable and equally effective organizational alternative to single-grade instruction. When it comes to student affect, the case for multigrade organization appears much stronger, with multigrade students out-performing single-grade students in more than 75 percent of the measures used. One wonders, then, why we do not have more schools organized into multigrade classrooms.

One response to this question is that we have nearly always organized classrooms by grade levels—that history and tradition dictate graded classrooms. This response seems a bit ironic, given the early dominance of the

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multigrade school in U.S. education. However, there is a related but more compelling answer that can be found in the classrooms themselves and in information drawn from classroom practitioners.

The majority of quantitative studies reviewed focused on numerical student outcome data (i.e., test scores). Detailed contextual information describing what actually occurs in the classroom was not collected in these studies. We do not learn how teachers plan, prepare, and teach with multiple grades. As a result, we do not know how teachers feel and respond to being assigned to a combined classroom. How are students grouped? Are classroom management and organization different? Are there different strategies for teaching specific subjects? These are just a few of the important questions that must be understood in light of the multigrade environment in order to understand why multigrade classrooms are not more prominent. Answers to these questions will also provide insight into the requirements and training needs of the multigrade teacher.

The next section of this book will address these questions through a review of qualitative studies, which allow us to see the multigrade classroom from the practitioner's point of view.

# Qualitative Studies: A View From the Inside

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There is widespread agreement in the literature that negative attitudes to and perceptions of multigrade classes prevail. In general, teachers are said to prefer single grades because multigrade classes mean more planning, preparation, organization, and work; catering to a wider range of abilities and maturity levels; less time for meeting individual student needs and for remediation; less time for reflection on teaching; lack of relevant professional training; and less satisfaction with their work (Mason & Burns, 1995, 1996; Veenman, 1995, 1996). Some positive perceptions have been identified. These usually concern students' social skill development, opportunities for the enhancement of learning by the lower grade-level group through exposure to upper grade-level work, reinforcement of earlier learning for the upper grade-level students, and opportunities for children to learn through peer tutoring (Mason & Burns, 1995; Veenman, 1995).

Parent perceptions are also reported to be negative in general (Veenman, 1995), though more so in urban as opposed to rural communities. The chief parental concern is said to be about the level of student achievement. One of the reasons principals prefer to have single grades is the degree of parental concern about multigrade classes and the time and energy spent in dealing with those concerns (Mason & Doepner, 1998).

While principals' attitudes have also been reported to be negative in general, Mason and Doepner (1998) found principals to be not as strongly opposed to multigrade classes as teachers. Given their role in supporting system policy and dealing with the reality of student numbers, principals' actual perceptions might have been more negative than those they expressed. The chief disadvantages perceived by principals were the necessity for teachers to prepare two curricula, the strength of parental concerns, and the negative attitude of teachers. The advantages mentioned emphasized administrative ease in coping with student numbers, but also included comments about social skill development and learning from peers.

This section will begin by presenting and reviewing a study by Appalachia Educational Laboratory on the development and implementation of multigrade programs in four rural districts in Kentucky, from 1991 to 1995. The study sample of six schools and a specific cohort of students included two schools in central Kentucky, two in western Kentucky, and two in eastern Kentucky. Four of the schools are located in towns, while two are in outlying communities or rural areas. Five are located in county districts; one is in a small, independent school district. The schools range in size from about 80 students to about 500 students. One of the schools has fewer than 30 percent of students on free or reduced-priced lunch; the remainder range from 50 to 60 percent.

The study relies on interviews, observations, and review of documents to provide information. Principals and primary teachers at all levels were interviewed. Preliminary findings were later shared with administrators and

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primary teachers at small group meetings. Input obtained during these meetings provided some new information and helped refine the analysis. At the end of the school year, a set of overall findings across the schools, as well as findings specific to each of the case study schools, was generated. In addition, lesson plans were analyzed to determine what content teachers covered and with what frequency each subject area was covered in the lesson plans.

This section, based on the entirety of teachers' work in each school, provides an overview of the problems and needs of rural school teachers in multigrade classrooms. The second section will focus on the multigrade classroom where three or more grades are combined and taught in a single classroom.

# Establishing the Needs of the Multigrade Teacher

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To understand multigrade program implementation in the study schools, one must recognize that Kentucky's primary program is but one component of a massive restructuring of the state's education system—one that reflects a new philosophy known as “systemic reform” (Murphy, 1990; Smith & O'Day, 1990). The Kentucky Educational Reform Act mandates that grades K–3 be replaced with a nongraded primary program. The rationale behind the nongraded program is that students will progress at their own rate through the primary years without experiencing the stigma of early school failure. This reform package shifted the focus from teacher input to student results. It gave schools autonomy to decide how to help students achieve reform goals, but held them accountable for student performance as measured by a performance-based assessment instrument, the Kentucky Instructional Results Information System (KIRIS). Thus, while primary teachers were required to implement new instructional, assessment, and grouping practices, they and their colleagues in higher grades were also held accountable for student performance. Schools, through their school-based decisionmaking councils, were given autonomy to decide how to help students achieve Kentucky Educational Reform Act goals.

## Implementation of the Program: Getting Started

Radical change is a difficult and often messy process, an observation well-documented by the education change literature (Fullan, 1996). The implementation of the multigrade program in the study districts was no exception. With increased professional development, primary teachers made many positive changes in the early years. They were hampered, however, by uneven implementation timelines and lack of guidance from a state department undergoing reorganization. The multigrade program was implemented on schedule but without some of the supports built into the law. For instance, in three schools, the multigrade program was well underway before family resource centers were established. The extended school services program was available early on, but in most of the study schools it was offered only to students in the fourth or higher grades.

The early professional development available to primary teachers offered a variety of instructional approaches from which to choose. In addition, the state department offered some early “multigrade institutes” that focused on the philosophy behind the program. Teachers at these sessions, however, expressed impatience with discussions of the multigrade program philosophy. Because they were required to have a program up and running by the next school year, they wanted help with the practicalities of day-to-day operation of a multigrade classroom. Perhaps in response to such complaints, professional development soon began to focus almost exclusively on instructional practices in multigrade settings and was conducted by a variety of

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providers, some of whom gave conflicting information as to what was appropriate multigrade practice. Because everyone (council members, principals, and teachers) was equally unsure as to what actually constituted appropriate practice, certain “myths” (“you can never use textbooks again,” “you can’t teach spelling or phonics,” “you can’t drill students on math facts”) became prevalent and were implemented for a time.

In addition to the multigrade institutes, the state department of education provided early guidance to primary teachers with the publication of two documents that included both philosophical and practical information (Kentucky Department of Education, 1991, 1993). Because the department was reorganizing simultaneously with multigrade program implementation, consistent guidance from the state was difficult to maintain. Continual shifting of state department personnel responsible for the multigrade program added to the difficulty.

The changes in multigrade classrooms have not been readily accepted by all teachers. Many teachers feared that movement away from the traditional, teacher-directed scope-and-sequence approach to instruction would result in the young students learning less. Some teachers may have interpreted “allows [students] to progress at their own rate” to mean that students should not be challenged academically. As soon as the first group of primary students entered fourth grade, comparisons of them to previous fourth-graders were made. Parents and teachers often remarked that students coming out of the multigrade programs had weak spelling skills and hadn’t memorized their math facts. To balance those complaints, parents and fourth-grade teachers also said that the exiting primary students were “better thinkers,” asked more questions, and were better creative writers. However, a lingering perception among upper-grade teachers that the multigrade program does not adequately prepare students for the fourth grade persists.

Changes in multigrade classrooms have been substantial, but movement toward greater implementation of the program has slowed considerably in the study schools. Generally, multigrade teachers seem to have settled into an approach comfortable for them, whether it equates to multigrade program implementation or not. The reasons vary from one school to the next. Four factors are prevalent at most schools: (1) emphasis on the critical attributes rather than on the overall purpose of the multigrade program, (2) legislative adjustments to the multigrade program, (3) lack of perceived fit between the multigrade program and results-based reform in grades 4–12, and (4) questions of efficacy, linked to teacher belief systems.

## **Today**

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**Obscured purpose of  
multigrade programs**

A basic problem that plagued implementation of the multigrade program at the study schools from the beginning was that the program's overall goal quickly became lost in the single-minded focus on implementing the Kentucky Educational Reform Act's goals and attributes. Rather than using the goals as tools to help students progress at their own rate in preparation for fourth grade, many teachers in the study schools became preoccupied with the multigrade component of the program; they found it difficult to manage logistically. In addition, they did not appear to link multigrade grouping to a broader purpose. They did not view it as a tool to achieve continuous progress, but as an end in itself and one they did not necessarily agree with or know how to manage. Without a clear understanding of the purpose of multigrade/multiability grouping, many primary teachers lacked the motivation and skills to work through the organizational and management problems inherent in this approach. The more common practice, however, was to return to more traditional grouping practices.

**Legislative adjustments**

At the same time that primary teachers were struggling to figure out how to implement the multigrade program and why they should do so, legislative changes influenced program implementation. The unintended effect of the new timeline adopted in 1992, coupled with the educational goals becoming statutory requirements, was that teachers were thrust into the overwhelming demands of multigrade classrooms before the state provided them with curriculum guidance. They had received ample training in new instructional approaches, but had little time to reflect on them and figure out how to weave challenging content into multigrade settings in ways to help students learn. The result was that primary teachers worked feverishly to fashion a program that demonstrated implementation of the goals, but, under the surface, many fundamental issues—such as the program's philosophy and how the curriculum should align—had not been worked out.

The teachers studied were experiencing difficulty by the 1993–94 school year, their second year of multigrade program implementation. Teachers doubted the new methods they were using. They feared students might not be learning the basics, now that many primary teachers no longer relied on textbooks as the main curriculum and no clear curriculum had emerged to replace them. At the same time, primary teachers were under pressure from some parents who did not understand the new ways of reporting and from intermediate teachers who reported that students were coming to them unable to work independently and without mastery of important basic skills. Multigrade teachers were also struggling to manage a wide range of abilities and age levels in their classrooms, often without knowing how or appreciating the purpose of doing so. Thus, multigrade teachers had reached a point by the end of the 1993–94 school year where they strongly needed a boost of some sort if they were to push forward toward greater multigrade implementation.

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From the inception of the reform, teachers in the study schools expressed the view that the multigrade program was out of synch with what happens in grades 4–12. This confusion was a result of the different orientations of the reform at the primary level and in grades 4–12, and of the lack of understanding as to how the two approaches to reform were meant to work in harmony. In the multigrade program, the focus had been on eliminating student failure and on building student self-esteem and love of learning. This was accomplished through mandates about how multigrade classrooms should operate. In grades 4–12, the focus was on student acquisition of Kentucky Educational Reform Act (KERA) goals and expectations. Classroom practices were not mandated, but students demonstrate their learning on KIRIS. So multigrade classrooms focused on process, while grades 4–12 were more focused on content. Both sets of teachers experienced frustration over the orientation of the reforms. Multigrade teachers agonized about what students should learn before progressing to the fourth grade, while upper-grade teachers wondered how to teach to KERA goals and expectations.

### **Fit between the multigrade program and results-based reform**

Why would teachers return to more traditional instructional approaches to prepare students for a test that is designed to measure higher-order skills? Two factors seem to bear on this issue. First is the question of efficacy: to make a change of this magnitude, teachers need some evidence that the program will produce results that are significantly better than those produced by more traditional methods. Statewide assessment results suggest that the primary program produces higher Kentucky Instructional Results Information System (KIRIS) results, given that “elementary schools that include the primary program continue to set the pace for school improvement” (Kentucky Department of Education, 1996). Yet, there is no clear evidence that high KIRIS scores are linked to full implementation of the multigrade program. Moreover, non-academic benefits of ungraded programs such as improved student attitudes toward self, peers, and school (Miller, 1990; Pavan, 1992; Veenman, 1995) may not be immediately apparent in assessments (although they may be reflected in the future on measures of achievement or noncognitive factors, such as reduced dropout rate and improved school attendance). Thus, teachers currently lack solid evidence that faithful implementation of the multigrade program will produce better results for students.

### **Efficacy and teacher belief systems**



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## Local Factors

**T**he preceding sections share some of the findings observed across study schools. It should be noted, however, that the multigrade program evolved differently in each of the schools studied. In some schools, the faculty eagerly took advantage of new resources provided through KERA to make many changes intended to produce a multigrade, multiability, and continuous progress program. In other schools, the faculty members were wary about abandoning practices that had been successful for them, and the changes they made were cautious and exploratory. In all the study schools, educators have arrived at a comfortable mix of innovative and traditional practices, although the mix is different from school to school. Four factors were influential in the development of the multigrade program at the local level: principal leadership, teacher beliefs, school climate, and the school's performance on the state assessment program. At some schools, these factors facilitated innovation in the multigrade program; at others, the factors operated in ways that hindered implementation.

### **Principal leadership**

The principal's ability to foster a common vision among the faculty and to build a supportive environment was a key factor in how multigrade programs were implemented. Stability was also important, with frequent changes in principals undermining school improvement, even when individual principals were strong.

### **Teacher beliefs**

Whether or not teachers shared common beliefs about multigrade education, and what those beliefs were, strongly influenced the development of a school's multigrade program. Where teachers were united in their approach to the multigrade program and in having high expectations for students, the program generally appeared successful, whether the school was implementing the letter of the law or not. If teachers held widely varying beliefs, they had difficulty developing a common commitment to a primary program that might contribute to overall school improvement.

### **School climate**

School climate refers to the general atmosphere of and mood at the school, including relations between teachers and administrators, camaraderie among staff and faculty, expectations for students, and attitude toward parents. In the study schools, a variety of situations producing positive school climates were observed. These included a tradition of academic excellence; strong principal leadership willingly accepted by teachers, students, and parents; "laissez-faire" principal oversight combined with strong teacher leadership; and active parent support or passive acceptance by parents of what the school was doing. Schools with less positive school climates exhibited characteristics such as poor relations between the principal and teachers and lack of camaraderie among teachers. In such schools, it was difficult for the faculty to maintain coordinated, consistent efforts to improve education.

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## Summary

**T**he previous study illustrates that bringing all teachers on board with the philosophy underlying the multigrade program has been no small task. In some of the studies, the educators and parents alike support a traditional approach, have had success with it, and are unlikely to change that approach. In other schools, local conflicts and leadership issues have hindered the development of consistency in instructional approaches.

Some of the national researchers involved with previous multigrade primary programs have addressed the philosophical issue that is seen at work in the study schools. Pavan (1992), Anderson (1993), and Goodlad and Anderson (1987) all mention that “multigrade” is more a philosophy than a practice. Thus, teachers’ beliefs must be aligned with the multigrade philosophy to have a successful multigrade program. Anderson goes so far as to say, “if too many teachers are uncomfortable with the philosophy and practices associated with multigrade, there is little point in taking the plunge.” Tyack and Cuban (1995) suggest that structures such as graded schools have been in place so long that they are viewed as emblematic of a “real school.” The support of parents, school boards, and the public must be enlisted to change something as deeply entrenched as the graded system of education.

During a training workshop for multigrade teachers in Oregon, several teacher and administrative practices supporting multigrade classroom implementation were identified. References to time and money as the most essential ingredients in creating multigrade classrooms were often made.

To meet the varied needs of multigrade students, teachers need indepth knowledge of child development and learning and a larger repertoire of instructional strategies than most single-grade teachers possess. They must be able to design open-ended, divergent learning experiences accessible to students functioning at different levels. They must know when and how to use homogeneous and heterogeneous grouping and how to design cooperative group tasks. They must be proficient in assessing, evaluating, and recording student progress using qualitative methods such as portfolios and anecdotal reports.

Multigrade teachers must be able to facilitate positive group interaction and to teach social skills and independent learning skills to individual students. They must know how to plan and work cooperatively with colleagues, as team teaching is commonly combined with multigrade organization. Finally, they must be able to explain multigrade practices to parents and other community members, building understanding and support for their use.

**What do teachers  
need to know?**

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**What do  
administrators  
need to know?**

The critical judgment and common sense of teachers are essential ingredients in successful implementation. Methods that sound promising in theory may need considerable adaptation to be effective in practice. Ideally, teachers should have opportunities to observe competent models demonstrating multigrade methods, try them out in the classroom, receive feedback on their efforts, reflect on the experience, revise their plans, and try again.

Administrators should understand the principles underlying multigrade organization and developmentally appropriate instructional practices. In planning for implementation, however, knowledge about the change process may be even more valuable. Innovations often fail because policymakers give teachers insufficient time, training, and psychological support (Hord, et al., 1987). Effectively implementing a single innovation requires several years and multigrade teaching involves multiple, complex innovations.

Administrators must realize that many of the underlying assumptions of multigrade teaching conflict with deeply ingrained assumptions underlying traditional age-graded instructional methods. Miller (1994) observes that for many teachers, “unlearning powerfully held notions about how children learn” is an essential part of implementing multigrade practices. This process is demanding, even for the most receptive and flexible individuals.

Multigrade instructional and organizational skills differ greatly from those used in the single-grade classroom. Veterans may feel as insecure as first-year teachers as they struggle to learn these new skills. In one school, Miller found that teachers with more experience seemed to feel even greater frustration in the early stages of change.

To help teachers weather this stressful transition process, administrators must provide psychological support as well as technical assistance. They must create a school culture that supports teacher learning, an environment in which it is safe to risk making mistakes. Without such support, many teachers will retreat to safe, familiar, age-graded methods.

**What is the  
principal’s role?**

The principal plays a key role in creating this supportive school culture. The principal must provide teachers with opportunities to learn multigrade teaching methods, monitor the progress of implementation, and give teachers praise, feedback, and suggestions. He or she should be adept at facilitating positive, cooperative interactions among teaching team members.

The principal must ensure that all teachers feel supported and endeavor to maintain a sense of community within the school. Innovative efforts by small groups of teachers can threaten to split teaching staff into “pro” and “con” subgroups; avoiding intra-school strife can resemble a delicate tightrope walk. The principal must also deal with teachers who are unwilling or unable to make the transition. Finally, the principal must build support for multiage practices in the larger community.

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Facilitating this transition requires sophisticated leadership and interpersonal skills, as well as personal characteristics such as patience and empathy. But most administrators receive little or no formal training in these skills. Those who possess them have generally learned them from experience, says Fullan (1996). Principals need opportunities for professional development and for interaction with colleagues who are facing similar challenges. They need support from district administrators as they develop these facilitative skills.

Table 1 provides a summary of the implications for multigrade instruction drawn from the studies. Many other studies conducted both in the United States and abroad have produced similar findings.

**TABLE 1: Implications for Teaching in a Multigrade Classroom**

<b>What do teachers need to know?</b>	<b>What is the principal's role?</b>	<b>What do administrators need to know?</b>
1. Indepth knowledge of child development	1. Creating a supportive school culture	1. A good understanding of the principles underlying multigrade organization and developmentally appropriate instructional practices
2. Larger repertoire of instructional strategies than most single-grade teachers possess	2. Provide teachers with opportunities to learn multigrade teaching methods	2. Knowledge about the change process
3. Ability to design open-ended divergent learning experiences accessible to students functioning at different levels	3. Monitor implementation progress, and give teachers praise, feedback, and suggestions	3. Provide teachers with psychological support as well as technical assistance
4. Understand and use homogeneous and heterogeneous grouping	4. Build support for multigrade practices in the larger community	4. Create a school culture that supports teacher learning, an environment in which it is safe to risk making mistakes
5. How to design cooperative group tasks		
6. Proficient in assessing, evaluating, and recording student progress using qualitative methods such as portfolios and anecdotal reports		

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## How Important Are Sufficient Time and Money?

**S**ufficient time and money are essential ingredients in creating and maintaining the multigrade classroom. Multigrade teaching takes years to master, and long-term staff development is expensive. So is hiring substitutes to enable teachers to attend workshops and plan changes with their colleagues. Other expenses include developmentally appropriate instructional materials for children, books and videotapes for adult learners, and outreach efforts to build community support.

Effective multigrade teaching is more time-consuming than age-graded teaching. One group of Oregon teachers listed daily preparation time, weekly team planning time, monthly inservice and curriculum development time, and occasional staff development time as essential on an ongoing basis (Oregon Department of Education and Ackerman Laboratory School, 1994). Creative scheduling can free up some time, but hiring additional teachers or paraprofessionals will likely be necessary. Raths and Fanning (1993) also suggest teachers be given computers for the “incredibly labor-intensive” clerical aspects of qualitative assessment.

Simply telling teachers to “squeeze it all in somehow” is not an option. Teachers often donate immense amounts of unpaid personal time during implementation, but few can maintain such sacrifice on a long-term basis, nor should they be asked to. Administrators must accept the challenge of communicating to the public that educational quality cannot exist without adequate financial support, and enlist their aid in providing these resources.

The Evergreen Elementary School in Holmen, Wisconsin, recently incorporated some multigrade classrooms. The school has some multigrade classrooms, mixed with some traditional graded classrooms. It began a multigrade program called Project K.I.D. (Kids Independently Developing) in 1994. The teachers involved were sent to inservice training programs around the area where they could learn more about multigrade teaching. They read and did research on what would be involved in becoming multigrade teachers. After a year of learning more about multigrade classrooms, they felt they were ready to try. They then began a journey that, while not without its pitfalls, ended very successfully. From this journey, they put together a summer inservice in 1995 for other teachers interested in embarking down the same path.

During the 1995 Project K.I.D. summer inservice, the instructing teachers and participating administrators were very enthusiastic about their programs. They spent two days promoting multigrade education as another way to reach children in the classroom. They were excited about their teaching and excited about sharing it with those who would attend their inservice. They listed a 10-step process for setting up a multigrade program (Project

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K.I.D., 1995). These steps are very helpful to new schools, administrators, and teachers who are looking into setting up multigrade classrooms.

1. Understand what multigrade means. Do the research.
2. Discuss multigrading with administrators, parents, and other teachers.
3. Determine the age breakdown for each classroom unit.
4. Condense the curriculum into a one-year, realistic set of goals. Concentrate on mandated goals and objectives for the oldest child in the room.
5. Match eligible children into each age unit. Be conscious of social and emotional growth as well as cognitive growth.
6. Check the heterogeneity of the classroom mixture. Each room must contain a mixture of ages, ability levels, and social needs.
7. Avoid placing all discipline problems or lower level children in the same classroom.
8. Determine the teaching strategies that will best serve the mixture of students. These will change as class groupings change.
9. Design special project areas or learning centers that can cover a wide range of ability levels. These should be problem-solving, hands-on experiences.
10. Determine three evaluation strategies that will provide authentic, diagnostic information for you and the parents. Be selective in trying everything that is new.

Multigrade classroom instruction places greater demands on teachers than teaching in a single grade. To be effective, teachers need to spend more time in planning and preparation. This often means modifying existing grade-level materials to ensure that students will be successful. In addition, there are many demands that are simply conditions of rural life. Although rural living can have many rewards, these demands, as described in Table 2, affect the rural teacher. When considered along with the requirements of the multigrade classroom, it is clear that the rural, multigrade classroom teacher has a demanding, but potentially very rewarding, job.

<b>Classroom Factors</b>	<ul style="list-style-type: none"> <li>• Classes are often made up of more than one grade level</li> <li>• The student-teacher ratio is often smaller</li> <li>• Teachers typically have three to five different preparations daily</li> <li>• Teachers often teach classes for areas in which they are not prepared</li> <li>• Equipment, instructional materials, and supplies are limited or dated</li> <li>• Resources for student use (media and library related) are limited</li> <li>• Lack of support exists for teachers in dealing with special needs children</li> </ul>
<b>School Factors</b>	<ul style="list-style-type: none"> <li>• Teachers are often responsible for extensive administrative, supervisory, extracurricular, and maintenance responsibilities</li> <li>• Junior and senior high schools are often combined</li> <li>• Budgets are often poor (supplies and materials are outdated)</li> <li>• Teachers are more isolated from ongoing staff development opportunities</li> <li>• Little or no inservice support is provided</li> <li>• Limited professional development information exists nearby</li> <li>• There are fewer defined rules and policies (a more informal administrative style)</li> <li>• Salaries are often lower</li> </ul>
<b>Socio-Cultural Factors</b>	<ul style="list-style-type: none"> <li>• Adequate housing may not be available.</li> <li>• Buying and selling property is more difficult.</li> <li>• Private lives are more open to scrutiny.</li> <li>• Cultural and geographical isolation and/or cultural/linguistic isolation are more prevalent. Services such as medical and shopping may be quite distant.</li> <li>• Parents have high expectations for teacher involvement in community activities.</li> <li>• Greater emphasis is placed on informal and personal communications.</li> <li>• Loneliness</li> <li>• Adjustment to extreme weather conditions</li> </ul>

*Adapted from (Miller, 1988, p. 3)*



# Instruction in a Multigrade Classroom With More Than Two Grades

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If the combination classroom seems like a formidable challenge to most teachers, then the classroom or school that combines three or more grades must appear to be an insurmountable obstacle. How can one teacher juggle all those grades, with their wide levels of student maturity, ability, and motivation? How can one teacher possibly prepare for the many curricular areas, meet individual student needs, and have the time to eat lunch? Teaching a broad range of grade levels in the same classroom is complex and demanding. But there are many successful teachers and students who are living proof that mixed-grade classes are a viable organizational structure for learning. Although empirical studies of these classrooms are quite scarce, enough descriptive literature has been compiled to illustrate both the complexity and the rewards of the multigrade classroom.

Dodendorf (1983) conducted a study of a rural Midwestern two-room school where 35 students spanning five grades were taught. The classroom was organized into two rooms. The “lower” room contained students in grades K–4, while the “upper” room contained students in grades 5–8. All aspects of classroom life were carefully observed, and students’ achievement test scores were compared with those from urban schools. Five positive environmental characteristics emerged from the observational data:

1. School routines: These were structured so that children began the day, completed workbook assignments, met in small groups, went to the library, told stories, and so forth, with a minimum amount of noise and disruption. In part, this was due to a scheduling tree where each student’s assignment was posted. It was also due to the highly predictable nature of class routines. For example, spelling tests were given all at once with the unique words for each grade given in turn.
2. Group learning: Each grade met with the teacher twice a day. When nongrouped students needed help, they sought out an older student first and then waited at the teacher’s station. Aides from the community might have been helpful, but the teacher felt that confidentiality was a problem.
3. Interdependence: This area was found to be the most striking quality in the school. Younger children often approached older children for help. Mixing of ages and grades was seen both in the classroom and at recess.
4. Independence: Observed work habits of children indicated a high degree of self-discipline. They had specific assignments and timelines to meet. They passed out corrected workbooks without teacher prompting.
5. Community involvement: Community members frequently visited the school. Mothers cooked hot lunch once a month

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and planned holiday parties. The board chairman stopped by to see if there were any needs. There did not appear to be a clear demarcation between the school and the community. Student attitudes toward new people entering the classroom were always hospitable and friendly. An example was the way kindergartners were welcomed into the classroom. Older students were warm and helped them, frequently explaining what was being worked on.

Results were favorable for the rural school. In terms of academics, students performed nearly the same as their urban counterparts. Only on a social studies subtest was there any significant difference. In terms of classroom climate and social relationships, the author noted that:

*Several advantages accrued for children and their parents in this rural school. The observed positive qualities far outweighed the disadvantages, and, more importantly, the values emphasized in the school reflected the community's values. This match of values is rarely achieved in heterogeneous urban schools. Value congruence between home and school certainly fostered a secure, stable world for these children to grow up in (p. 103).*

Clearly, Dodendorf's study suggests that the five-grade classroom can be a socially and academically effective learning environment for students. The implication, however, is that success depends on the ability of the teacher to organize and manage instruction so that cooperation, independence, and a motivation to learn become environmental norms.

Martha Young, a county superintendent with Mid-Rivers School District, describes the history of Montana's country schools since the early 1900s. Of particular interest is her description of two very small one- and two-room schools. Mid-Rivers School has nine students covering a span of six grades. Students are given responsibility for a large share of housekeeping tasks on a rotating basis: keeping the room clean (janitor), taking care of paper and supplies (supply clerk), checking out books (librarian), ringing the bell, monitoring play equipment, organizing the calendar, leading the flag salute, and sharpening pencils. Each week a student is honored by not having duties for the week. Developing self-reliance, responsibility, and independence in students enables the teacher to better meet individual student needs. It also develops a strong sense of community and cooperation within the classroom (personal communication).

In order to meet the needs of all students at their respective instructional levels, the teacher relies heavily on scheduling and cross-age tutoring. For example, the student who is the acting librarian that week reads a daily story to younger children while the teacher works with the older students.

Students might also work together to complete tasks while the teacher meets with students individually. Reading, math, English, and spelling are

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handled in this individualized manner. All other subjects are taught as a group, with each student working at his or her particular level; art, social studies, science, and music projects are frequently employed. The entire school also sings together, plays recorders, has a marching band, and publishes a school newspaper. Because the school is so isolated, it serves as the center of the community. Parents provide help with track meets, field trips, and special programs.

Sand Springs School is slightly larger than Mid-Rivers with two teachers serving grades K–10. Students are divided into a K–4 class and a 5–10 class. There is an aide in the lower level who teaches kindergarten under the teacher's supervision. This frees the teacher to work with the older students. An additional aide comes in several times a week and provides time for the teacher to work on academic subjects. On the aide's days off, the teacher works on music, arts, crafts, and physical education. A similar pattern of organization is followed with the upper-level class. Because of the complexity of subject matter in the upper-level class, three aides work under the teacher's supervision.

In the lower-level class, the teacher organizes instruction around key concepts that can be introduced to all students and then individualized to the different levels in the class. For example, time was explained to all the students. The youngest ones drew hands on clocks while the teacher gave instruction on minutes to other students. Special activities also serve as basis for total grouping activities: fire prevention week led to a play, Valentine's Day led to an all-school party, and the Christmas program involved everyone. For Columbus Day and Thanksgiving, students all worked together on special projects. Students were also grouped by ability so that the talented second-grader could work with the fourth-grader, or the slower student could work with younger students for special skills.

In both schools, the teachers have taken full advantage of the flexibility afforded by a multigrade classroom. The teachers have used a two-phased approach to group instruction. In the first phase, they introduced a concept to the entire class (across all grade levels). This allowed for cross-grade interaction with the concurrent benefits of younger students learning from older ones. It also is a more efficient use of teacher time. In the second phase, the teacher has students engaged in closed-task activities at their respective ability levels. Students can also be easily moved from one ability level to another as needed, without feeling the stigma that is usually associated with out-of-grade placements.

Special events such as holidays, field trips, or any activity that does not require strict grouping by ability (such as closed-task skills) are organized around total class participation. Every member of the class contributes and shares in the successes of everyone else. Students also learn to be responsible and self-directed, to work independently, to provide help to others, and

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to receive help when needed. This independence is critically important because it enables the teacher to work individually with students.

Betsy Bryan's (1986) story is unique. She completed her teaching degree in 1980 from an Eastern college. While getting her teaching degree, she student taught in a small, rural two-room school and became convinced that she wanted to teach in a similar situation. Unable to secure a position on the East Coast, she went to New Mexico and obtained a position as a K-1 teacher (so she was told by the school board). With difficulty, she found a house to live in and then school began. However, things had changed since her interview with the school board. She now had a class of 18 students ranging from ages five to nine:

*Developmentally they ranged from kids who barely spoke and still wet their pants to children who were ready for third-grade work. Some spoke Spanish and some didn't. There were child neglect cases and others who came from caring homes. A few had learning disabilities while most learned easily and delighted in it (p. 3).*

To make matters even more formidable, Bryan had no "professional direction or support, limited materials, and little experience" (p. 3). She was not supervised or expected to maintain grade-level differences. However, she had student taught with two master rural teachers who provided examples upon which she could pattern her own teaching.

At first, in order to provide structure and order, she stuck to the basal reader and the other available materials. As the year progressed and she developed a relationship with her class, Bryan began developing her own materials, "scrounging through garage sales for children's books, and visiting a teacher center 100 miles away to get ideas and supplies." Unfortunately, Bryan does not provide sufficient detail to allow the reader to know how she managed instruction or curriculum. She does tell us that national test scores revealed her students were performing above the national average. Although positive about her first teaching experience, Bryan left after only one year.

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Unlike the Dodendorf (1983) study or the description of the two rural Utah schools, Bryan found herself an outsider in an unknown teaching situation. She faced difficulty finding housing, a sudden change in her teaching assignment, feelings of isolation from other teachers and the community. If Bryan had remained, would her experience have turned out more like that described by Dodendorf? From her own words, it seems as if conditions in the school and community preempted that possibility:

*It appears that the district [I] taught in [was] full of conflict and lacked leaders who could solve these conflicts. The staff were from diverse backgrounds and had widely different motivations and philosophies. There were bound to be problems and yet neither the community nor the administration nor the teachers were able to resolve them. [The district] lacked a sense of direction and demonstrated little concern for their teachers. Other factors that influenced [my] decision to leave included living conditions and the loneliness [I] felt trying to fit into [a] rural close-knit community (p. 5).*

Ann Hoffman's (1982) story is quite different from that of Betsy Bryan (1986). Hoffman's school was smaller than Bryan's, but her class size and range of students were similar. When Hoffman first began to teach in the Kingvale, Utah, two-room school, she had 15 students in grades K-3 and no aide, but after three years her class grew to 27 students and an aide was hired. Hoffman says that when she first began teaching in Kingvale, "we had a wonderful time. In the past two years the class load has grown. We still have a wonderful time but a lot noisier one!"

Hoffman (1982) describes in detail how she organized her classroom to accommodate student needs. Clearly, her planning and organization are well in advance of instruction. Before school begins, she reviews science and social studies texts for upper-grade students and makes a list of what must be covered, by week, for the entire year. Materials and films are ordered at this time. She believes preparation must be done well in advance of the students.

Hoffman distinguishes between those subjects that lend themselves to total class instruction and those that must be taught on a more individualized or graded basis. For example, health, storytime, literature, drama, and music can be taught to the entire class. These subjects are also considered "elastic" in that they can be altered, combined, or skipped depending on circumstances. Consistent time is scheduled for high-priority, skill-based subjects such as reading and math. For example, reading and math are taught in the morning, with students working independently while the teacher holds conferences with and instructs other students. First grade is taught as a group, but the other grades are primarily individualized. Index cards are used to track individual progress. Reading is taught for 70 minutes daily.

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What is clear from Hoffman's account of her classroom is that she is well organized and has a clear structure for the way instructional events unfold. Students know what is expected, and classroom routines are well established. There is also a sense of the novel and interesting. There are daily student oral presentations (across grades) of stories, poems, reports, and current events. A learning center on magnets and a center with special books for students can be found. Friends drop into the classroom and may become part of a lesson. Hoffman says she tries to keep her room interesting, but she notes the multigrade environment is not all roses:

*I can't pass a problem child on to another teacher the next year. I can't use the same old art ideas year after year. Science, social studies, music, ... every subject has to be completely revamped each year.*

*Films are boring when seen for several years in a row and so have to be changed. Room decorations must be new and different. I can't get new ideas from the teachers next door. I have to be super-prepared or I'm in for a very hectic day (p. 45).*

Yet, despite these challenges, Hoffman stresses that the strengths far outweigh the disadvantages:

*It is a most satisfying feeling to watch a kindergartner mature into a hard working third-grader. A child can easily be placed ahead or back in areas in which he excels or is having trouble. Older children can work with the younger children. We have a ski program for physical education. The parents are friendly and helpful (p. 45).*

# Summary

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**T**he multigrade classroom and one-room school are alive and well in rural America. Stories like Ann Hoffman's from Kingvale abound if someone is there to hear them. Unfortunately, the story told by Betsy Bryan is often heard instead. Problems of inadequate facilities, poor leadership, and limited resources have been used as evidence for seeking consolidation. Without question, teaching in a multigrade classroom with more than two grades is a demanding task requiring a special type of individual. But it also requires training, community understanding, and support.

Many educators mistakenly think multigrade grouping is the first—or even the only—element that needs to be changed. But according to Anita McClanahan, early childhood education coordinator for the Oregon Department of Education, mixing ages isn't the magic key to improvement. "You have to change your methods of instruction. It's what we do with the groups of children that makes a difference" (Gaustad, 1994).

As evidenced in the descriptions presented, the multigrade teacher must be well-organized and put in lots of preparation time. Educators have much to learn from these teachers about classroom management and instructional organization.

The multigrade classroom is an environment where routines are clearly understood and followed. Students learn to be self-directed learners, often working alone or in small groups. They must also be able to help others and serve as positive role models. A positive, family-like atmosphere often must be developed—one in which cooperation and solidarity among all students predominate. Without these elements, a multigrade teacher could not manage the vast variability in student needs. Bruce Barker (1986) does an excellent job summarizing the characteristics and working conditions that the multigrade classroom teacher faces:

*She lives in a remote setting in either the Midwest or far West, enjoys teaching in a small school ... she teaches an average of 11 students ranging in grades one through eight, works an average of about nine hours a day in tasks related to instruction, yet is also the school custodian and school secretary. She may even prepare the school lunch and drive the school bus. The assignment to teach in a one-teacher school may be the most demanding of all positions in the profession, but for those who love young people and enjoy teaching, it could well be the most rewarding (p. 150).*

# Conclusion

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**T**his review of the research on multigrade classroom instruction focused on answering two questions:

1. What effect does multigrade instruction have on student performance?
2. What kind of teacher preparation or training is needed to be an effective teacher in a multigrade classroom?

In addition, these two questions implicitly ask what implications the research literature has for districts currently operating or considering multigrade classrooms.

In terms of academic achievement, multigrade students do not appear to fare any better or worse than single-grade students. Some research evidence does suggest there may be significant differences depending on subject and/or grade level. Primarily, these studies reflect the complex and variable nature of school life. However, there are not enough of these studies to make safe generalizations regarding which subjects or grade levels are best for multigrade instruction.

The evidence drawn from research focusing on affective student measures provides a strong case supporting multigrade instruction. Student attitudes toward school and self tend to be more positive in the mixed-grade classrooms. Multigrade students also interact more with students of other ages and have more positive attitudes toward peers than single-grade students. Several factors appear to play a part in these differences.

In the multigrade classroom, student developmental and academic differences can be handled more easily than in a single-grade class. Multigrade students regularly interact with a wide range of students. This increases the likelihood that individual students can find an academic or developmental match in their class. For example, the immature upper-grade student may find a lower grade student to befriend without the stigma generally associated with “hanging around with younger students.”

In a similar manner, the teacher can have lower-performing students from an upper grade work with students in the lower grade without the burden associated with out-of-grade-level placement. Students also learn the advantages inherent in behaving cooperatively with older and younger students, and they have a greater opportunity to develop responsibility by modeling and helping other students.

On face value, students in multigrade classrooms would appear to be better off than students in a single-grade classroom. However, the evidence suggests that from the point of view of school organizational norms and levels of teacher preparedness, the multigrade classroom generally serves as a temporary remedy to school enrollment and financial concerns.



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In other words, most multigrade (especially combined-grades) classrooms are viewed as temporary remedies to be endured for a year (or so) until things return to “normal.” Lest we too quickly forget our educational heritage in the district school, there are still more than 1,000 one-room schools where three or more grades are taught together (Murphy, 1990). But the tide of teacher and administrative opinion strongly favors organizing schools by grade level.

Graded classes are believed to be more efficient and easier for the teacher. This assumption is based on the notion that students at a given administrative grade level are all at the same ability level. In other words, a fourth-grade teacher only has students functioning at the fourth-grade ability level. Most educators know that at any given grade level there is a span of student ability (Pratt & Treacey, 1986). This variability can often be seen in the form of multiple math and reading groups with most other subjects being taught at the grade level. In larger metropolitan schools, ability differences are even further distinguishable by those students who attend Title I, special education, or talented and gifted programs. In still other classrooms, no distinctions may be made. Instead, all students are taught as if they were at the same ability level. In reality, many single-grade classrooms are quite similar to the multigrade classroom. Except in those rare cases of tight homogeneity of the student population in a community, there may be more similarities than differences between multigrade and single-grade classrooms.

The skills needed to effectively teach the multigrade and the single-grade (multilevel) classroom appear to be quite similar. The differences between the two classrooms may be more a product of socialization and expectation than of fact. Clearly, students are harmed when the teacher fails to recognize and teach to the individual differences in a classroom. It also is apparent that teachers are harmed when they have not been adequately prepared to teach students with varying ages and abilities. Wragg (1984) does an excellent job summarizing these instructional implications when he describes the results of a large-scale study of teaching skills:

*There seemed to be much less confidence among teachers about how best to teach bright pupils and slow learners in mixed-ability classes than in any other aspect of professional work we studied during the project. Most mixed-ability teaching was to the whole class, and some schools made almost no use at all of cooperative groupwork. Even the teachers we studied who were regarded as successful found it very exacting to teach a mixed-ability class well, and were less sure about their teaching of bright pupils than about other aspects (p. 197).*

What does the research tell us regarding the skills required of the multigrade teacher? Pratt and Treacey's (1986) observation suggests that the skills needed in the single-grade, multiability classroom are similar to those of the multigrade teacher. With an increase in the number of grades

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taught in a single classroom, a greater demand is placed on teacher resources, both cognitive and emotional. Six key variables affecting successful multi-grade teaching were identified from the research:

1. Classroom organization: arranging and organizing instructional resources and the physical environment in order to facilitate student learning, independence, and interdependence
2. Classroom management and discipline: developing and implementing classroom schedules and routines that promote clear, predictable instructional patterns, especially those that enhance student responsibility for their own learning; developing independence and interdependence is also stressed
3. Instructional organization and curriculum: planning, developing, and implementing instructional strategies and routines that allow for a maximum of cooperative and self-directed student learning based on diagnosed student needs; also includes the effective use of time
4. Instructional delivery and grouping: instructional methods that will improve the quality of instruction, including strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students
5. Self-directed learning: developing skills and strategies in students that allow for a high level of independence and efficiency in learning, individually or in combination with other students
6. Peer tutoring: developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels

In the multigrade classroom, more time must be spent in organizing and planning for instruction. This is required if the teacher wants to meet the individual needs of students and to successfully monitor student progress. Extra materials and strategies must be developed so that students will be meaningfully engaged. This allows the teacher to meet with small groups or individuals.

Since the teacher cannot be everywhere or with every student at the same time, the teacher shares instructional responsibilities with students within a context of clear rules and routines. Students know what is expected. They know what assignments to work on, when they are due, how to get them graded, how to get extra help, and where to turn them in.

Students learn how to help one another and themselves. At an early age, students are expected to develop independence. The effective multi-

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grade teacher establishes a climate to promote and develop this independence. For example, when kindergarten students enter the classroom for the first time, they receive help and guidance not only from the teacher, but also from older students. Soon, they learn to be self-directed learners capable of solving many of their own problems. They become self-sufficient. Kindergartners see how other students behave, and they learn what is expected of them. Because older students willingly help them, kindergartners also learn cooperation and that the teacher is not the only source of knowledge.

Instructional grouping practices also play an important role in the successful multigrade classroom. Grouping is a strategy for meeting teacher and student needs. The teacher emphasizes the similarities among the different grades and teaches to them, thus conserving valuable teacher time. For example, whole-class (across grades) instruction is often used because the teacher can have contact with more students. However, whole-class instruction in the effective multigrade classroom differs from what one generally finds in a single-grade class.

Multigrade teachers recognize that whole-class instruction must revolve around open-task activities if all students are to be engaged. For example, a teacher can introduce a writing assignment through topic development where all students brainstorm for ideas. In this context, students from first through eighth grade can discuss and share their different perspectives. Students soon learn how to listen to and respect the opinions of others. For the older students, first-graders are not simply “those little kids from the primary grades down the hall.” They are classmates. Learning cooperation is a survival skill—a necessary condition of life in the multigrade classroom. Everyone depends on each other, and this interdependency extends beyond the walls of the school to include the community.

But teaching in the multigrade classroom also has many problems. It is more complex and demanding than the single-grade classroom. A teacher cannot ignore developmental differences in students or be ill-prepared for a day’s instruction. Demands on teacher time require well-developed organizational skills. Clearly, the multigrade classroom is not for the timid, inexperienced, or untrained teacher.

# Implications

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**F**or districts or schools contemplating or currently operating multi-grade classrooms, there are important implications drawn from the research:

1. Student performance:
  - Students in multigrade classrooms perform academically as well as students from single grades.
  - Students in multigrade classrooms generally have more favorable attitudes toward their peers and school than students from single-grade classrooms.
  - Student performance is mediated by the level of teacher expertise. In other words, multigrade instruction requires a high level of skill in classroom management and instructional organization, and a broad repertoire of instructional strategies. Without adequate training and experience, student performance will likely suffer.
2. Training in how to teach in a multigrade classroom is critically important for success. However, training should be grounded in a field-based experience where the novice has the opportunity to observe and teach with an effective model. This should be coupled with ongoing staff development.
3. The concept of multigrade instruction is more likely to be seen as important if linked to the concept of the multilevel class. For example, prospective teachers are more likely to take a course entitled “teaching multiple ability levels in the classroom” than “teaching in the multigrade classroom.” When most new teachers seek employment, they expect to work with a single grade level. However, circumstance can change that and place the teacher in a combined classroom.
4. The skills of the effective multigrade teacher are worth emulating in the single-grade classroom.
5. If a district deems it necessary to combine grades, administrators should be apprised of how roles will change and what is to be expected, especially in the following areas:
  - Increase in planning and materials preparation
  - Increased level of stress because there is less time to reflect on teaching
  - Support and guidance regarding curriculum alignment
  - Potential for increased pressure from parents

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- Importance of communicating to the teacher what is expected in terms of planning and grade differentiation
  - The effect of grade differentiation versus the development of across-grade solidarity and cooperation
  - Importance of ongoing support for success
  - Value of recognizing teacher efforts
6. Multigrade instruction has a long, successful tradition and, based on research evidence, is a viable approach to school organization.
7. There are definite characteristics of successful multigrade teachers that should be considered in teacher selection:
- Well-organized
  - Creative and flexible
  - Willing to work hard
  - Resourceful and self-directed
  - Willing to work closely with the community
  - Strong belief in the importance of cooperation and personal responsibility in the classroom with the ability to develop these characteristics in students
  - Prior successful experience at the grade levels to be taught

# Risks and Concerns

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Every method of grouping children has risks. One concern with multi-grade grouping is ensuring that younger children are not overwhelmed by older or more competent students, in any class. Teachers have an important role to play in maximizing the potential benefits of age and ability mixture. For example, they can encourage children to turn to each other for explanations, directions, and comfort in times of stress. They can turn to older students to read words, paragraphs, and stories to younger children, and to listen to younger students read.

In addition, teachers can encourage older children to take responsibility, either for an individual younger child or for younger children in general. Teachers can encourage older children not to gloat over their superior skills, but to take satisfaction in their competence in reading to younger children, in writing things down for them, in explaining things, in showing them how to use the computer, in helping them find something, in helping them get dressed to go outdoors, and so forth.

Teachers can show older children how to protect themselves from being pestered by younger children, for example, by saying to the younger children, “I can’t help you right this minute, but I will as soon as I finish what I am doing.” Teachers can also help younger children learn to accept their own limitations and their place in the total scheme of things, as well as encourage older children to think of roles and suitable levels that younger students could take in their work or activities. The basic requirement is that the children be respectful of each other.

When teachers discourage older children from calling younger ones “cry babies” or “little dummies,” they help resist the temptation of age stereotyping. Every once in a while a teacher says to a misbehaving first-grader something like “that behavior belongs in kindergarten.” The teacher then expects them to be kind and helpful to the kindergartners during recess, when they’ve just heard that kindergartners are a lower form of life! A mixed-age group can be a context in which to teach children not only to appreciate where they themselves so recently were, but also to prize their own progress and to develop a sense of the continuity of development.

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# The Multigrade Classroom

## A Resource for Small, Rural Schools



Book 2: Classroom Organization



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 2: Classroom Organization**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.



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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.

# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.

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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.

# Participants in the Multigrade Conference

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**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaunakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*W.W. Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age

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interactions through tutoring and shared discovery. Social competence develops for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is

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usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.





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# Classroom Organization

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In the typical multigrade classroom, where multiple activities are likely to occur at the same time, classroom organization is a critical factor in developing smooth, predictable routines. We also know from research on effective classroom practice that when students have a clear understanding of classroom structure, procedures, and rules, they are more likely to follow them, especially if they have had some involvement in decisionmaking. Although there is no single “best” way to arrange your classroom, there are some general guidelines that apply to most multigrade settings. Sample classroom floor plans and a planning kit have been included to aid you in laying out your own classroom.

## The Activity Centers Approach

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An **activity center** can be defined as any discernible pattern of student or teacher behavior that can be clearly described and labeled. One common example is seatwork, where students work independently at a desk. Another example is pairwork, where two students work together. Three or more students working together is generally characterized as groupwork. A classroom may also have areas designated for art, audio-visual equipment, computers, and other instructional resources. Each example reflects a type of activity where expectations for behavior may be clearly defined. An activity center is best described as an area of the classroom that the teacher has designated for a specific purpose.

Two other types of centers need to be distinguished from an activity center. A **learning center** is a term used to describe a self-instruction learning activity that has been placed in a clearly defined area of the classroom. It can be in any subject and generally includes objectives, instructions, and evaluation (see Book 5, *Instructional Delivery and Grouping*, for more detail).

Another type of center is a **subject area resource center**. This is an area where student resources relating to a specific subject are located. For example, resources relating to the study of science may all be located in one well-marked area of the classroom.

What types of activities normally occur in your classroom? What types of activities would you like to occur? Do you have group projects? Are there students who tutor? Do you meet with individual students and small groups?

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Is it important for students to be self-directed, or to be able to help themselves with little teacher interruption? Answers to these questions should help you decide how to arrange your classroom in terms of the activities that engage students.

There are seven general types of activities found in most classrooms:

1. Quiet or individual study
2. Testing
3. Whole-class instruction
4. Partner work
5. Group discussions
6. Audiovisual and reference work
7. Teacher tutoring or small-group instruction

Furniture and equipment should be arranged to create activity centers appropriate to the type of activity you intend to occur.

In the multigrade classroom there may be many different kinds of activities going on at the same time. Some students in fourth and fifth grade might be working on a group art project while two students may be peer tutoring in math. Two first-graders may meet with the teacher, and several students might be completing independent assignments requiring the use of a tape recorder and the computer. The teacher's task is to arrange the classroom so that all these activities can take place at the same time with a minimum of disruption and of teacher direction and supervision.

## General Considerations When Planning

**W**hen deciding how you would like your classroom organized, you must consider the types of behaviors that are appropriate during teacher instruction, student independent study, or small-group work and how the arrangement of your classroom will foster these different learning activities. Topics to consider when making decisions regarding classroom arrangement include the following:

### **Activity and noise level**

When deciding how you will arrange your room in order to accommodate different learning activities, you must consider the level of activity and noise that is likely to occur. If students work together on a group activity, they are likely to make more noise than if they are independently completing a report or taking a test. Obviously, you would not want to have these two activities happening side by side. Therefore, you should try to arrange centers from quiet (e.g., independent study) to noisier level (e.g., group

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discussion) activities. For example, in one corner of your room you might have students working independently. At the opposite corner, students could be holding a discussion group.

It is helpful to label these different activity areas in your classroom as “centers.” As you define the different learning centers, you will want to specify the type of behavior appropriate for each area. If you have a reading center, for example, you might, in consultation with students, decide that books will be returned after use, that quiet reading is expected, and that only a certain number of students can be there at a time.

Janet Banks (1997), a multigrade teacher in the Chimacum School District in Washington state, describes one of the ways she controls the noise level in her classroom:

*I created a “noise meter” poster that I stick to the chalkboard in front of my class. The chalkboard is magnetized and I move a refrigerator magnet on the poster to indicate the acceptable level of noise. The levels are labeled: 0-No Voices; 1-Whisper or “Buddy” Voices; 2-Table Voices (can only be heard clearly at the student’s table); and 3-Classroom Voices (can be heard clearly across the room, useful during whole-class discussions). At the first of the year we practice these different noise levels. In addition, we discuss when the different levels are appropriate and why. Many times during the day I let the students choose which noise level they wish to work at; sometimes I limit choice to a couple of different levels and sometimes I don’t.*

The noise meter, as shown below, is a visual reminder of the agreed-upon or appropriate noise level. If the students’ noise gets too far above this, they are reminded to work more quietly. If it is necessary to do this again, the children practice saying a phrase in the appropriate voice and volume. This way the students get to practice what their voices should sound like, and they get to hear what it should sound like in the classroom as a whole.



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**Using visual  
barriers to define  
activity areas**

When you decide on your activity centers, it is quite helpful to use your furniture as a means of defining the boundaries of different work areas. Bulletin boards, portable blackboards, bookshelves, and file cabinets work well as dividers. These visual barriers help define the different centers and help isolate the different levels of activity. However, it is quite important that you can see what is occurring at each center from your teacher work area. This will make it much easier to monitor student behavior. For example, if you see that a student is working with another student in the independent area, you can request they work independently or move to a center where talking is allowed.

**Teacher resources**

It is important to give some thought to the idea of a teacher resource center. This is an area for teacher-controlled resources such as tests, teacher manuals, and assignment files. In addition, this area serves as a place where the teacher meets with individuals or small groups of students. Most teachers simply put a table, bookshelves, file cabinets, and a blackboard in the center.

**Student resources**

You may wish to place resources used by students in a central location. These may include textbooks, encyclopedias, library books, dictionaries, and student storage. These materials need to be arranged so that students can find and return them independently. This area should be accessible from any center in the room with a minimum of disruption.

**Traffic patterns**

Once you have identified your activity centers and made some tentative decisions regarding their placement, you must review your floor plan with an eye toward student traffic patterns. Your goal is to enable students to move freely from one activity center to another with minimum disruption. If a student needs a book from the resource center, will he or she have to walk through the quiet area? You should make sure that audiovisual equipment is near an electrical outlet and that science materials needed for an assignment are located in the appropriate areas. Of course, you must also consider that there is clear and safe access to emergency exits.

Pat Reck, a multigrade teacher from Brothers, Oregon, describes how she has organized her classroom to accommodate student traffic:

*The drinking fountain, pencil sharpener, and bathroom privileges account for the most out-of-seat traffic jams. Therefore, these are allocated on the same wall and direction [corner] of the room. It seemed reasonable to put paper and pencil supplies and baskets for finished work on top of a bookshelf in this same area and focus study group tables, the teacher resource area, and quiet reading corners on opposite walls so there would be limited traffic, noise, and distractions.*

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When arranging your classroom, ensure that activities that will occur at each work area will be supported by the equipment and materials available. In the individual study area, this means you might use student desks separated from one another to discourage talking; in the pairwork area you could place two student desks together to encourage sharing. You do not want students wandering through different centers seeking electric outlets or water. Furnishings need to be appropriate to the type of activity that will occur at each center.

### **Specifying activity centers for students**

In multigrade classrooms, it is important to consider the age and size differences among students. For example, consideration should be given to the procedures for finding materials and to the size of the furniture. If you intend to use a materials resource center, then some thought should be given to primary-grade students who may not be able to read. This is quite important if you want to have students find materials independent of the teacher. Several strategies are worth considering. Subject areas could be color-coded and pictures could be used instead of words. Older student helpers could also be used. Remember, your purpose in using centers is to encourage and develop independence.

### **Accommodating age differences**

The physical size differences of students should also be considered. If you have a range of students in your classroom from grades 1 to 7, then the same size furniture will not accommodate these size differences. When reviewing your room arrangement, you might ask yourself whether the different activity areas will work with the range of students in your classroom. For example, are the desks in the independent study area of differing sizes? Can a range of age levels use the discussion area without having to make changes? When planning your floor plan, keep the students you teach in mind—their age and developmental and physical characteristics. Reck from Brothers illustrates the importance of this when she describes how she adjusts to student needs to create a sense of personal space:

*Children respond to ownership and territorial bases in a multigrade situation. I created a “kindergarten” corner with a floor rug for cut and paste, free reading, coloring, and sprawling! There were tubs of learning games, headsets with children’s literature, and lots of manipulatives. This area was for “free” time after curriculum and times when I was one-on-one with others. My sixth-, seventh-, and eighth-graders felt they needed a “lions den” where they could get away. So the computer room became a large study-table area where they could go and work in pairs and have some freedom from the younger ones. This area should reflect junior high in posters, charts, art work, and visuals appropriate to their age.*

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**Student belongings**

Flexibility is the key to organizing your multigrade classroom. Students are moving from one working group to another throughout the day. Frequently they are also working on an individual task. Due to the flexibility this kind of movement requires, traditional classroom arrangements may not work. For example, assigned seats can limit flexibility. However, it is important that students have a place to store their belongings. Numerous ideas have been developed for storing student belongings. Traditionally, individual desks are used for student storage. However, in the multigrade classroom this may not be appropriate. Some teachers have used tote trays, lockers, or stacked boxes.

Janet Banks shares some of the ways her students arrange and store their belongings:

*My students are moving from one working group to another throughout the day. Frequently they are also working on an individual task. Due to the flexibility this kind of movement requires, I have chosen to use tables throughout the classroom instead of student desks. Because students have no desk in which to keep their supplies, I converted a number of lower bookshelves into student cubbies. The local hospital donated numerous dishpans that serve as the main container for supplies such as crayons, pencils, scissors, and other small items.*

*Below the "Pink Tubs," as the students call them, are kept their three-ring binder, spiral notebook, and clipboard. This system has worked very well for me. However, student cubbies will get a bit too messy from time to time just as desks do. In response to this I have a hand-drawn poster that I have the students color at the first of the year. Additionally, I remind them routinely that being organized will help them with their school work and that a clean cubby is part of being organized.*

*Another part of my system that has helped with students having the right stuff at the right time of the day is the use of three-ring binders. They carry these with them most of the day as they include nearly everything they need, organized in various sections. The "Pee-Chee" type folders I have them bring at the first of school are turned inside-out and punched with a three-hole punch. They are then labeled (mostly by subject) and used as pocket dividers in their binders. I also ask that students bring a pencil pouch to keep snapped into their binders. This helps them keep track of their pencils.*



# Explaining Your Room Arrangement

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**H**owever you choose to arrange your room, you will need to explain the rationale to students and parents. It is often helpful to label each activity center and to include a few simple rules regarding the appropriate behavior for each center. If students help develop the rules and make the signs for the different centers, they are more likely to understand and follow the rules.

If you clearly define each activity center and specify behavior standards, students will have a much easier time. This does not mean that you have a set of strict rules governing the entire classroom. It does mean that you have rules that reflect the purpose of the different areas in the room. For example, you might post a sign over the pairwork area that states the name of the area and explains that only students working quietly in pairs are allowed. It means that in the independent work area, there is no talking, only working independently. However, students need to be introduced to the room, and their behavior needs to be consistently monitored. Robin Lovec, a multi-grade teacher from Montana, outlines what is expected of students. This is done very early in the year. She explains:

*The teacher should be the model and let students watch while you act out the role of the student. Let them hear your thought process as you go through what is expected within the guidelines established for the classroom, and what would happen if you went outside those guidelines.*

# Floor Plan Design

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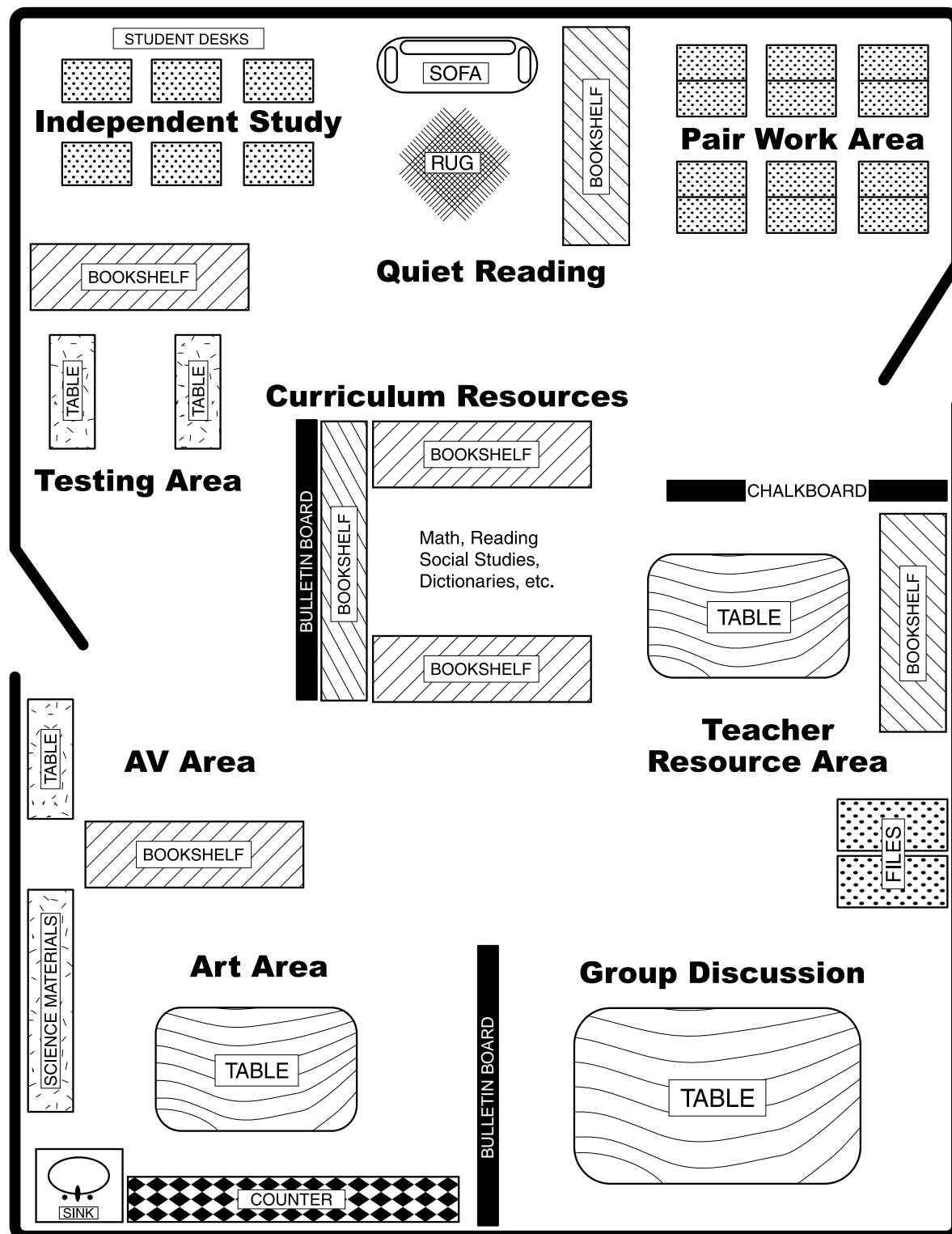
**T**he principles of classroom design should be clear. You must decide on several key factors:

- What types of activities will occur in your classroom?
- How will you arrange the room to accommodate these activities?
- How will you communicate to students the different activity areas of your room?
- What behavior is desired in each area? Will students help decide?
- How will you teach students what will be expected in each area and why?

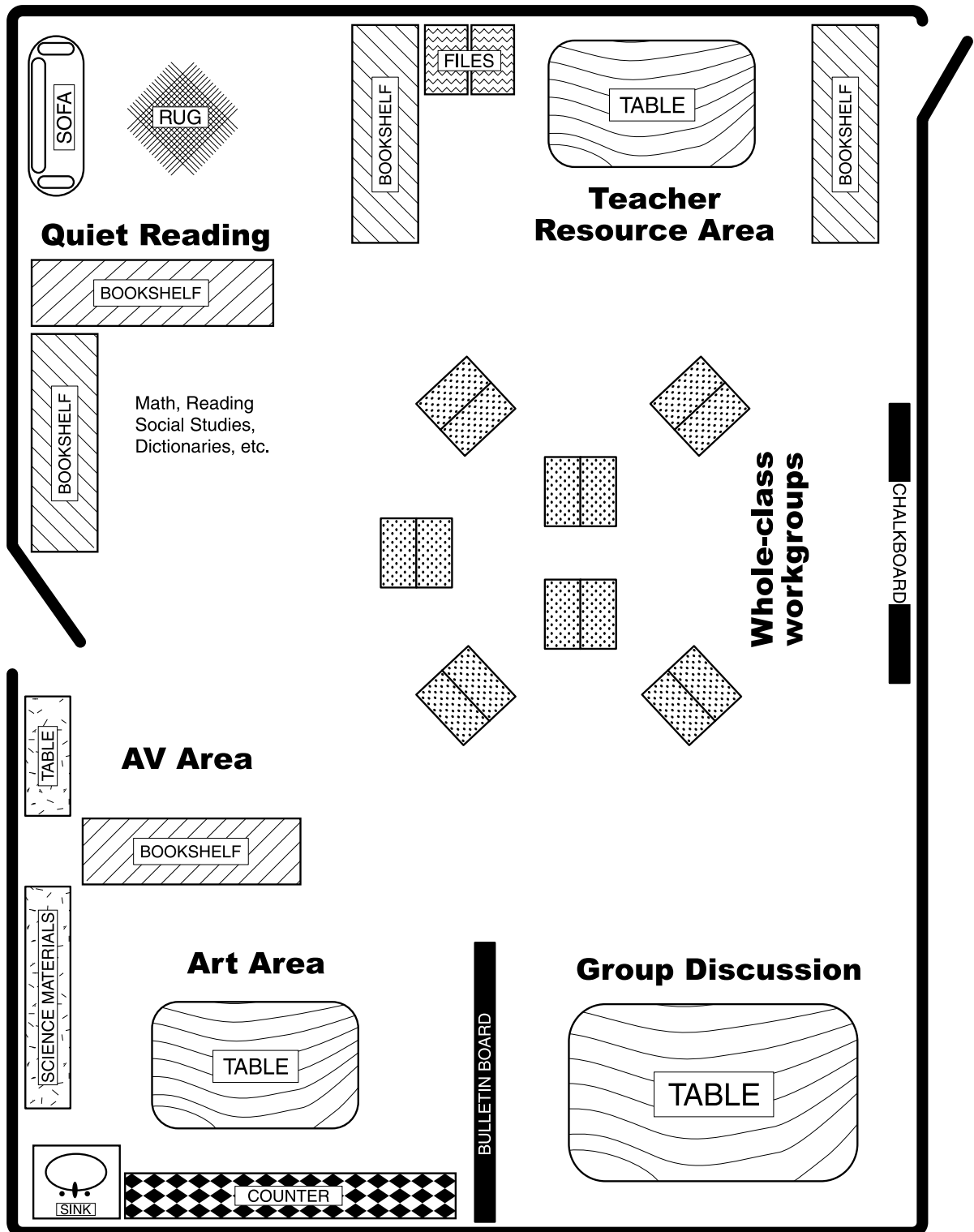
Figures 1 and 2 on the following pages are examples of floor plans organized around the concept of activity centers and cooperative learning centers. Figures 3 and 4 illustrate a semicontained classroom that allows for expansion and reorganization as needed. The following questions may be useful in reviewing these classroom organization plans:

- What activity centers are there? How are they organized in relationship to one another?
- How have the different activity centers been defined? Are the furnishings for each center appropriate for the activities that will occur?
- What effect will traffic patterns have on the intended activities for each center?
- How have the principles of noise and activity level been used in laying out the room?
- What changes would you make if this were your room?
- Will you need to separate the class into two equal parts for “half-class” instruction at any time?

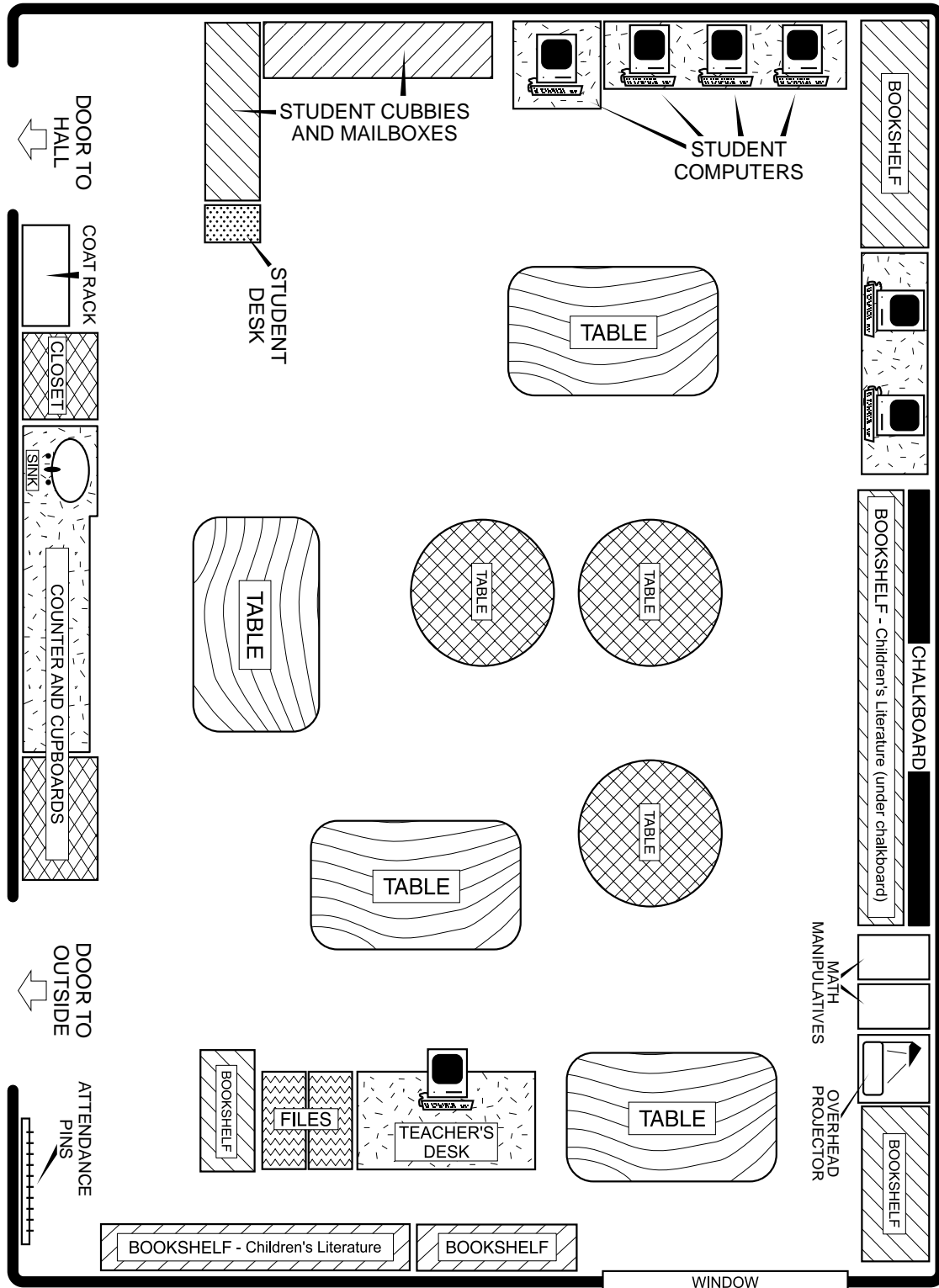
**FIGURE 1: Self-Contained Classroom (Organized by Areas of Activity)**



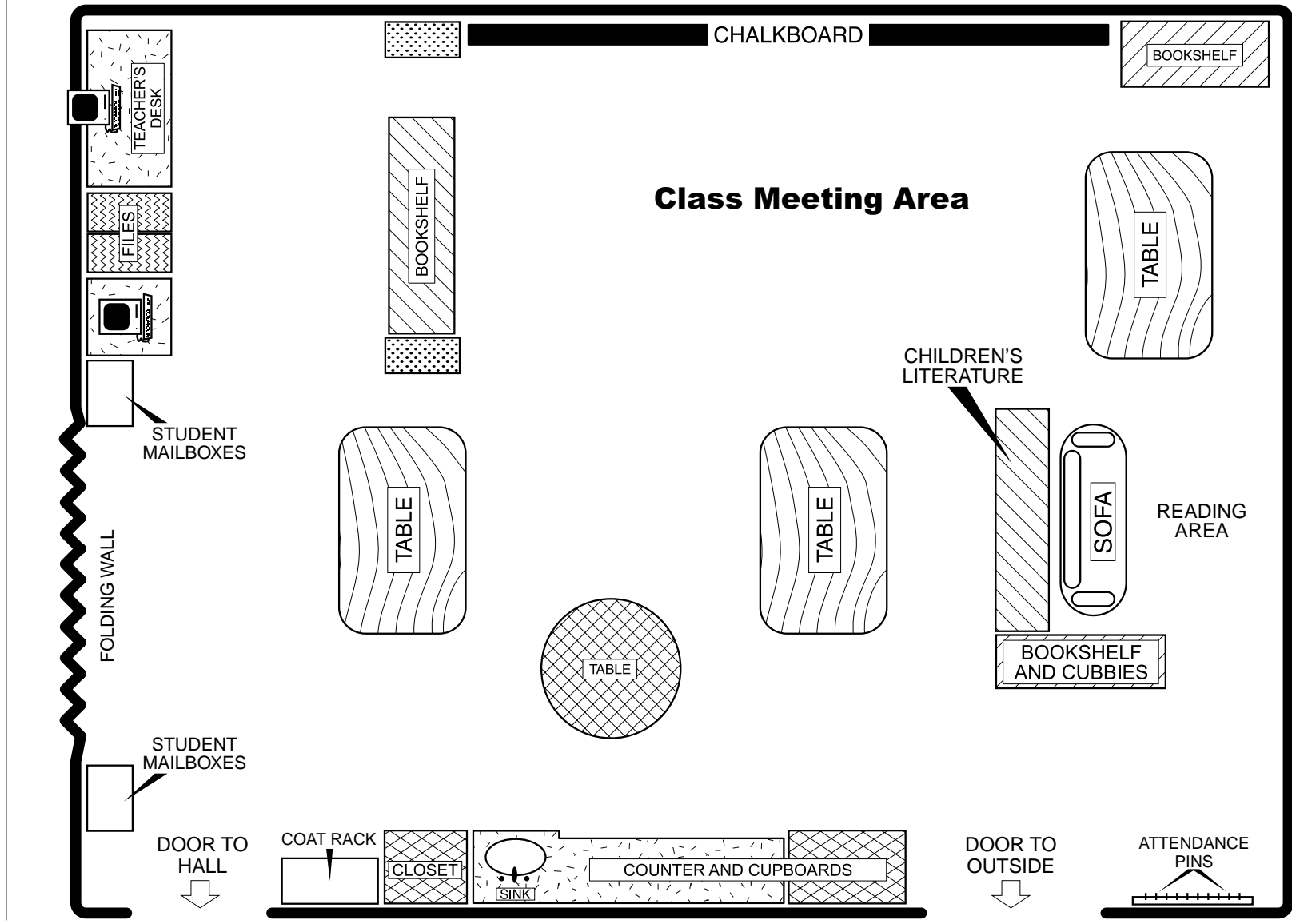
**FIGURE 2: Self-Contained Classroom (Organized for Cooperative Learning)**



**FIGURE 3: Comprehensive Classroom Layout**



**FIGURE 4: Self-Contained Classroom (Organized for Flexibility)**



# Designing Your Own Room

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**W**ith a clear understanding of what types of learning you would like to see in your classroom, you are ready to begin laying out your floor plan. Beth Conant (1997), a multigrade classroom teacher and early childhood educator from Washington state, identifies six basic principles to help guide multigrade teachers in designing their classrooms for more efficient instruction. Conant emphasizes the need to look at the physical arrangement of furniture and materials to ensure that it directs how the children are to use the room. Although this is only one way to organize your classroom, it does provide an excellent place to begin. Conant's six guiding principles are:

1. The efficient classroom is a center of learning activities. Furniture and materials in the classroom should directly support the types of learning that occur.
  - Use shelving and furniture to define and separate learning areas. Shelving should be pulled away from and placed at right angles to walls in order to provide barriers to define space. Children stay focused on activities better when they are not distracted by other activities visible in the room.
2. The use of subject-area resource centers is an efficient method of organizing classroom resources. For example, organizing reading materials into a reading center makes sense for several reasons:
  - Pictures of each item or examples of the small items themselves should be taped to the shelf or container where materials are stored. Pictures provide visual cues that help children remember where items belong. Clean-up becomes a learning experience. Later in the year, pictures may be paired with the printed work so that children begin to naturally develop sight-word associations with materials and picture symbols.
  - Display materials simply with a few items on each shelf. A large number of materials on a shelf may be distracting to children who are not used to making choices. Group similar materials in proximity to each other. For example, tubs of small manipulative materials might be shelved together in one unit, and puzzles displayed on shelves of another. With materials in one area, no time is lost trying to locate materials scattered about the room.
  - The arrangement of the center (books, table, chairs, pencils, paper, rug, blackboard, etc.) encourages reading behavior.
3. Classroom arrangement must be flexible to accommodate new learning activities. Learning centers can be rearranged or changed entirely to support the learning activities desired by the teacher. Subject-area center materials are often changed to reflect new units of study.

- 
4. Involve the children in decisions about room arrangement. After you have gotten to know your group and they have become accustomed to you and the classroom, hold a group meeting to discuss with the children how the room is working.
  5. Place a picture chart of the sequence of daily activities in a prominent place in the room. The chart helps children to remember what comes next, providing them with a sense of security and control.
  6. Quiet and noisy activities need to be in opposing areas of the room. Wet areas such as the sand and water table and art areas need to be well-separated from dry areas such as books, manipulatives, and toys. Housekeeping and block corner, which encourage dramatic play, may complement each other if placed nearby.

## Three-Step Design

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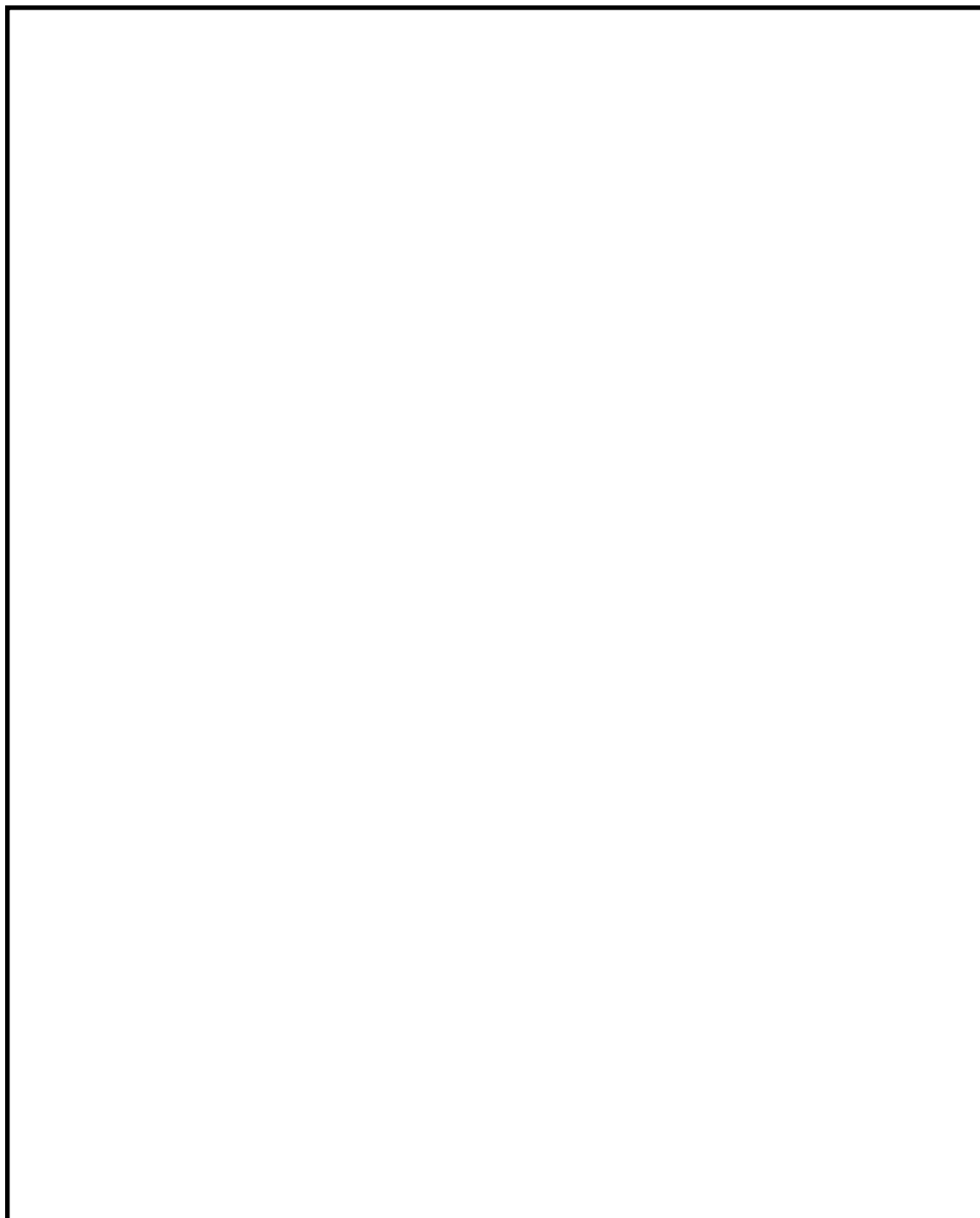
**I**n laying out your floor plan, you might want to refer to the sample plans introduced earlier. Some teachers have found it beneficial to use small pieces of paper to represent the different types of furnishings. These can then be moved around as desired. Feel free to cut out and use the furnishings found in the sample plan. Be sure to include doorways, sinks, counters, and other permanent structures. If the spaces provided for designing your floor plan are too small, use a blank sheet of paper.



## Step 1: Describing the way it is now

---

**D**raw a floor plan of the room you will be teaching in. This may be the classroom you taught in last year or a new one.

A large, empty rectangular box with a black border, intended for drawing a floor plan of a classroom.

## Step 2: Deciding on the types of activities that will occur

---

**I**dentify the specific learning activities that will take place in your room and write them on the lines below. It may be helpful to jot down the types of behavior you expect for each activity. You may want to refer to earlier sections entitled, The Activity Centers Approach and General Considerations When Planning.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

D. \_\_\_\_\_

E. \_\_\_\_\_

F. \_\_\_\_\_

G. \_\_\_\_\_

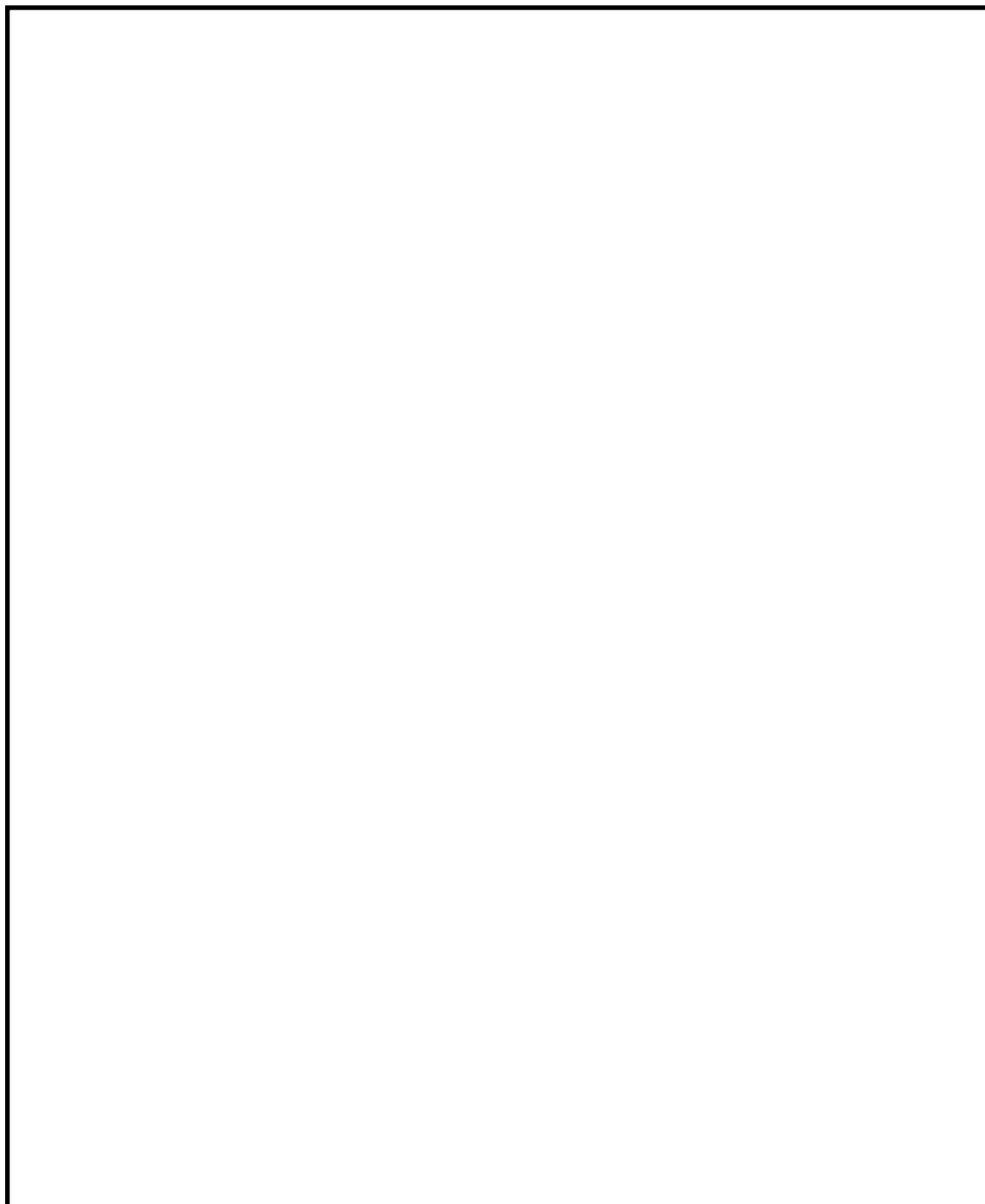
H. \_\_\_\_\_

I. \_\_\_\_\_

### Step 3: Drawing the final plan

---

**R**eview your drawing of the classroom in which you will be teaching in terms of the activities you have listed in Step 2. Now, lay out your classroom to promote the learning activities you desire, noting the placement of furnishings, materials, and storage areas.



# Conclusion

---

**W**hether you choose to organize your classroom around activity centers or not, remember that your floor plan should reflect regular classroom activities. If, for example, you offer lots of cooperative learning activities, you may design your room with several group discussion areas. If you do lots of teaching to large groups, then you will likely have an area where all the students can be seated together.

If your goal is to revise your classroom around activity centers, keep in mind that you don't have to do it all at once. You can allow the classroom to evolve over the year, adding a center at a time as both you and the students become more comfortable with small-group, self-directed learning activities.

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# Resources

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Bingham, A.A., Dorta, P., McClaskey, M., & O'Keefe, J. (1995).

*Exploring the multiage classroom*. York, ME: Stenhouse.

If you are planning to move into multiage grouping or have already made the transition from a conventional classroom, you will welcome the honest, practical advice that makes *Exploring the Multiage Classroom* a genuine handbook: comprehensive, realistic, and accessible. You will see what teachers find rewarding in multiage teaching and why it works so well for children who can learn from the models provided by the literacy and learning of other children around them.

Available from:           Stenhouse Publishers  
                                  P.O. Box 360  
                                  York, ME 03909

Cotton, K. (1995). *Effective schooling practices: A research synthesis*.

Portland, OR: Northwest Regional Educational Laboratory.

This is the third edition of a research synthesis that was first published by NWREL in 1984 and updated in 1990. This edition reflects educational research literature published within the past five years, together with inquiries into topical areas not investigated previously. Like its predecessors, this synthesis cites classroom, school, and district practices that research has shown to foster positive student achievement, attitudes, and social behavior.

Available from:           Northwest Regional Educational Laboratory  
                                  101 S.W. Main Street, Suite 500  
                                  Portland, OR 97204-3297

Dennison, B., Hose, G., Johnson, M., Large, R., Quinn, M., & Fogarty, M. (1978). Rearranging the traditional two-teacher school to fit the linear multiple-area plan. *Teachers' Forum* (Australia), 1(2), 5-7. (ERIC Document Reproduction Service No. ED 229 182)

This article describes a plan for converting a traditional two-room school into an open teaching space in which two teachers teach cooperatively. A sample floor plan is presented.

Available from:           DynEDRS, Inc.  
                                  7420 Fullerton Road, Suite 110  
                                  Springfield, VA 22153-2852

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Yates, R. (n.d.). *Keeping organized: Student cubbies and binders*.  
Chimacum, WA: Chimacum Elementary School. Retrieved  
September 27, 2000, from the World Wide Web: [www.chimacum.wednet.edu/multiage/sorganiz.html](http://www.chimacum.wednet.edu/multiage/sorganiz.html)

Students are moving from one working group to another throughout the day. Frequently they are also working on an individual task. Due to the flexibility this kind of movement requires, it is important to use tables throughout the classroom instead of student desks. This book shares ideas on how to organize and manage student belongings.

Available from:                      Chimacum Elementary School  
   91 West Valley Road  
   Chimacum, WA 98325

Yates, R. (n.d.). Resources for multiage education web site. Chimacum, WA: Chimacum Elementary School. Retrieved September 27, 2000, from the World Wide Web: [www.chimacum.wednet.edu/multiage/](http://www.chimacum.wednet.edu/multiage/)

This Web site is dedicated to helping teachers and administrators interested in multiage education find and gather relevant resources. Here you will find materials that educators have collected, created, or modified along with links to other places on the Web and references to print material that are especially helpful. Of course, this reflects just some of the ways a multi-age program can be set up.



K 1 2 3 4 5 6 7 8

# The Multigrade Classroom

## A Resource for Small, Rural Schools



Book 3: Classroom Management and Discipline



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 3: Classroom Management and Discipline**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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# Acknowledgments

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The following selections have been reprinted with permission:

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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.

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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.

# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.

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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.



# Participants in the Multigrade Conference

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**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaumakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*W.W. Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age

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interactions through tutoring and shared discovery. Social competence develops for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is

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usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.



# Contents

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# Classroom Management and Discipline

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**T**he following information is meant only as a starting point—something you will want to add to, modify, and use in the way that best meets your needs. Managing the classroom is a critical element in successful instruction and requires good organizational ability and consistency. Students come into the classroom expecting the teacher to give them guidance and direction about rules and procedures and how the classroom is organized for instructional use. Having a uniform and predictable set of rules and procedures simplifies the task of being successful. Having clear and efficient routines makes classroom life run smoothly. Because there are so many different levels in a multigrade classroom, the need for clear, consistent rules and procedures is even more critical than in traditional, single-grade classrooms.

## Three Phases of Classroom Management and Discipline

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**E**ffective teachers have been consistently observed by researchers to engage in three distinct phases of classroom management and discipline: (1) planning before school begins, (2) implementing plans, and (3) maintenance (Emmer, 1987). Each phase will be presented in this book, along with examples of what effective teachers do during each phase.

### Phase 1: Preparing for the Beginning of School

**E**ffective teachers make their expectations explicit through clear rules and procedures that are consistently taught and enforced. The first few weeks of school are used to establish these expectations. Therefore, early planning and preparation before school begins is critical for starting the school year right. As one multigrade teacher noted, “Teachers must have their own idea of what the classroom will look like and how it will function before the first day of school.” In other words, before the students arrive, the teacher must develop a vision of classroom life: how students will behave and relate to one another, where they will work, how resources will be organized, and other important classroom considerations.



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During Phase 1, teachers focus on planning the arrangement of the classroom, organizing supplies and materials, and planning instructional activities for the first few days of school. In a review of seven different studies of teacher planning for the beginning of the school year, Emmer (1987) identify several key areas for teacher attention:

**Arranging the classroom**

Effective teachers focus on organizing furnishings and materials in order to facilitate instruction in several general ways: (1) student seating should be easy to monitor by the teacher and not distracting to the students; (2) well-used areas of the room should be easily accessible; and (3) materials and equipment should be quite accessible by students and the teacher.

**Identifying expectations for behavior**

Establishing productive norms for student behavior can make the difference between success and failure for a classroom teacher. These norms are best set early in the year in a variety of ways, such as “teacher praise for appropriate behavior, corrective feedback, formally presented rules, establishing procedures that regulate behavior during classroom activities, and academic work requirements” (Emmer, 1987, pp. 236–237). Students must learn how to behave in a wide variety of work and social situations. If the teacher can lay out in advance the desired expectations for some of these situations, it is more likely that students will behave in the desired manner. Some of the activities that must be planned for are:

- Whole-class instruction
- Teacher-led small groups
- Independent, small, cooperative workgroups
- Individual seatwork
- Transitions between activities
- Room and equipment use
- Tutoring students
- Giving and receiving assignments

**Planning consequences**

Once a teacher develops clear expectations for student behavior in different learning and social areas, the next step is to decide on consequences for students who follow or do not follow these expectations. Consequences may be divided into two general areas: rewards and punishment. Stickers, awards, prizes, or privileges are examples of commonly used extrinsic rewards. Emmer (1987) suggest that punishments “be reserved for behaviors that are easily observable and relatively infrequent [otherwise] inconsistent teacher use of punishment is much more likely” (p. 238). When students are successful and receive teacher feedback, approval, and recognition, the need for extrinsic rewards is minimal. In other words, teacher behavior and instructional quality have a bigger impact on producing

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positive student behavior than the reward and punishment consequences a teacher may establish (see Book 4: Instructional Organization, Curriculum, and Evaluation for more information on establishing a positive instructional climate).

Consequences should be consistently maintained and administered, and they should be the same for everyone. Students who have disabilities will break the rules like anyone else, and they should receive similar consequences.

Student participation in creating the best learning environment will create a class that manages lessons and time well. As students become more capable and able to take on responsibility, they will want to voice their opinions on aspects of school life. Teachers should be able to listen to their ideas and implement them.

### **Student participation**

Additional areas will be presented toward the end of this book in the planning guide for classroom procedures and rules.

## **Phase 2: Beginning the School Year**

**D**uring this phase, the teacher seeks to put into practice plans that have been developed prior to the start of school. This is the time when norms are established and students develop a view of how “their particular class will operate.” Emmer (1987) identifies four principles that can help the teacher get off to a good start:

Teach rules and expectations as if they were academic content. For example, if you use cooperative workgroups, be sure students know what it looks like to cooperate and give them the opportunity to practice. Students should know from the teacher exactly what is expected for the different types of classroom activities. A recently completed five-year study of a program designed to teach elementary students prosocial behaviors demonstrated the effectiveness of treating rules and expectations as academic content. Children in the program displayed more spontaneous prosocial behavior toward one another, and were more supportive, friendly, and helpful than students in a group of comparison schools (Villa, Thousand, & Stainback, 1992). However, it was not only teaching desired social skills and behavior that produced the results, but also structuring the learning environment and teacher modeling.

### **1. Teach students to behave**

It is important to recognize that students may be anxious or nervous about their new environment. They may have concerns about being successful, getting along well with others socially, and doing the “right” thing. By being supportive and encouraging and providing activities with high success rates, you can alleviate some of these fears.

### **2. Consider students’ concerns**

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**3. Lead the class**

Research has demonstrated that the most effective teachers maintain a highly central role in the classroom. They are not authoritarian tyrants, but they do not turn the class over to the students. They make decisions aimed at achieving specific purposes, and they monitor their decisions for effectiveness. For example, if they want students to work in small problem-solving groups, they make sure students know how to work cooperatively and that the assignment is clearly understood. Then they monitor group progress to ensure that students are successful in carrying out their assignment.

**4. The teacher as role model**

It is important to teach students that how we act and interact with others is our own responsibility. As a teacher, maintain a positive classroom climate. All students must be taught how to interact with others and, of course, teachers must model respect for them with an impartial and caring attitude. No amount of teaching can overshadow our own actions and behavior. All students will benefit from a good role model, particularly in a teacher's interactions with students who have challenges.

### Phase 3: Maintaining Good Discipline

Once the school year is underway and positive student social and academic norms have been established, the teacher must seek to maintain these norms. In this phase, the teacher's role shifts toward keeping high levels of student engagement and preventing disruptions of the learning environment. Emmer (1987) divides this phase into two key areas:

**1. Monitoring and handling inappropriate behavior**

Effective teachers are good managers who do not ignore large amounts of inappropriate behavior. They monitor classroom norms continuously, stopping and then redirecting incidents of unacceptable behavior in a prompt and timely manner. However, these teachers are not negative or sarcastic toward student misbehavior, and they respond in ways that do not call attention to the problem at hand. For example, when a student is observed off task, the teacher moves closer to the student but says nothing as an alternative to verbally reprimanding the student.

Shane teaches in a single-room school in eastern Montana and uses several strategies to keep students on task. Shane says that when kids run out of things to do, they are likely to disturb others. To avoid this situation, she keeps a running list of things for them to do when their work is finished. Students are encouraged to add ideas to the list. Some of the activities on her list include:

- Reading *Ranger Rick* or *World* magazine
- Listening to tapes
- Free reading: encyclopedias, library books, and so forth

- 
- Looking up words in the dictionary
  - Helping the teacher
  - Journal writing
  - Writing a penpal
  - Reading to a younger student

Russell Yates, a multigrade teacher in the Chimacum School District in Washington state, uses a problem-solving form, as shown in Figure 1, to control behavior and maintain discipline. He explains:

*When individual students make a behavior mistake in my classroom, I have them complete a problem-solving form. This process not only gently reminds the student of the expected behavior; it also directs them to find their own workable solution. When I ask the student to "please fill out a problem-solving form," he or she will walk back to the "problem-solving desk," complete the form including pictures of the problem and solution at the bottom of the form, place it in a specific paper tray, and then appropriately rejoin the class or activity. At my convenience (usually the next recess), I use the completed form to discuss the problem and solution with the student.*

Following are additional techniques that teachers can use in their classroom to help them achieve effective group management and control. They have been adapted from "A Primer on Classroom Discipline: Principles Old and New," by Thomas R. McDaniel (1986).

Be sure you have the attention of everyone in your classroom before you start your lesson. Don't attempt to teach over the chatter of students who are not paying attention. Inexperienced teachers sometimes think that by beginning their lesson, the class will settle down. The children will see that things are underway now and understand that it is time to go to work. Sometimes this works, but the children are also going to think that you are willing to compete with them. You don't mind talking while they talk. You are willing to speak louder so that they can finish their conversation even after you have started the lesson. They get the idea that you accept their inattention and that it is permissible to talk while you are presenting a lesson.

### **Focusing**

The focusing technique means that teachers will demand students' attention before beginning, that you will wait and not start until everyone has settled down. Experienced teachers know that silence on their part is very effective. They will punctuate their waiting by extending it five to 10 seconds after the classroom is completely quiet. Then they begin their lesson using a quieter voice than normal.

A soft-spoken teacher often has a calmer, quieter classroom than one with a stronger voice. Her students sit still in order to hear what she says.

**FIGURE 1: Problem-Solving Form**

# Problem-Solving Form

*My problem is:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*My solution is:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Student signature:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Teacher signature:* \_\_\_\_\_ *Date:* \_\_\_\_\_

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*Problem* *Solution*

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Uncertainty increases the level of excitement in the classroom. The technique of direct instruction is to begin each class by telling the students exactly what will be happening. The teacher outlines what he and the students will be doing this period. Time limits for some tasks may be set.

### **Direct instruction**

An effective way to marry this technique with the first one is to include time at the end of the period for students to do activities of their choosing. The teacher may finish the description of the hour's activities with: "And I think we will have some time at the end of the period for you to chat with your friends, go to the library, or catch up on work for other classes."

A teacher is more willing to wait for class attention when he knows there is extra time to meet his goals and objectives. The students soon realize that the more time the teacher waits for their attention, the less free time they have at the end of the hour.

The key to this principle is to circulate. Get up and move around the room. While your students are working, make the rounds. Check on their progress.

### **Monitoring**

An effective teacher will make a pass through the whole room about two minutes after the students have started a written assignment. She checks that each student has started, that the children are on the correct page, and that everyone has put their name on their papers. The delay is important. She wants her students to have a problem or two finished so she can check that answers are correctly labeled or in complete sentences. She provides individualized instruction as needed. Students who are not yet quite on task will be quick to get going as they see her approach. Those who are distracted or slow to get started can be nudged along.

The teacher does not interrupt the class or try to make general announcements unless she notices that several students have difficulty with the same thing. The teacher uses a quiet voice, and her students appreciate her personal and positive attention.

McDaniel tells us of a saying that goes, "Values are caught, not taught." Teachers who are courteous, prompt, enthusiastic, in control, patient, and organized provide examples for their students through their own behavior. The "do as I say, not as I do" teachers send mixed messages that confuse students and invite misbehavior.

### **Modeling**

If you want students to use quiet voices in your classroom while they work, you too will use a quiet voice as you move through the room helping youngsters.

A standard item in the classroom of the 1950s was the clerk's bell. A shiny nickel bell sat on the teacher's desk. With one tap of the button on top, he had everyone's attention. Teachers have shown a lot of ingenuity over the years in making use of nonverbal cues in the classroom. Some flip light switches. Others keep clickers in their pockets.

### **Nonverbal cuing**

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Nonverbal cues can also be facial expressions, body posture, and hand signals. Care should be given in choosing the types of cues you use in your classroom. Take time to explain what you want the student to do when you use your cues.

**Environmental control**

A classroom can be a warm, cheery place. Students enjoy an environment that changes periodically. Study centers with pictures and color invite enthusiasm for your subject.

Young people like to know about you and your interests. Include personal items in your classroom. A family picture or a few items from a hobby or collection on your desk will trigger personal conversations with your students. As they get to know you better, you will see fewer problems with discipline.

Just as you may want to enrich your classroom, there are times when you may want to impoverish it as well. You may need a quiet corner with few distractions. Some students will get caught up in visual exploration. For them, the splash and color act as a siren that pulls them off task. They may need more “vanilla” and less “rocky road.” Have a place to which you can steer these youngsters. Let them get their work done first, then come back to explore and enjoy the rest of the room.

**Low-profile intervention**

Most students are sent to the principal’s office as a result of confrontational escalation. The teacher has called them on a lesser offense, but in the moments that follow, the student and the teacher are swept up in a verbal maelstrom. Much of this can be avoided when the teacher’s intervention is quiet and calm.

An effective teacher will take care that the student is not rewarded for misbehavior by becoming the focus of attention. She moves around and monitors the activity in her classroom. She anticipates problems before they occur. Her approach to a misbehaving student is inconspicuous. Others in the class are not distracted.

While lecturing to her class this teacher makes effective use of name-dropping. If she sees a student talking or off task, she simply drops the youngster’s name into her dialogue in a natural way: “And you see, David, we carry the one to the tens column.” David hears his name and is drawn back on task. The rest of the class doesn’t seem to notice.

**Assertive discipline**

This is traditional limit-setting authoritarianism. When executed it includes a good mix of praise. This is high-profile discipline. The teacher is the boss, and no child has the right to interfere with the learning of any student. Clear rules are laid out and consistently enforced.

**Assertive I-messages**

A component of assertive discipline, I-messages are statements that the teacher uses when confronting a student who is misbehaving. They are intended to be clear descriptions of what the student is supposed to do.

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The teacher who makes good use of this technique will focus the child's attention first and foremost on the behavior he wants, not on the misbehavior. ("I want you to ..." or "I need you to ..." or "I expect you to ...")

The inexperienced teacher may incorrectly try "I want you to stop ...", only to discover that this usually triggers confrontation and denial. The focus is on the misbehavior, and the student is quick to retort, "I wasn't doing anything!" or "It wasn't my fault!" or "Since when is there a rule against ...", and escalation has begun.

These I-messages are expressions of our feelings. Thomas Gordon, creator of Teacher Effectiveness Training (TET), tells us to structure these messages in three parts. First, describe the child's behavior ("When you talk while I talk ..."). Second, state the effect this behavior has on the teacher ("... I have to stop my teaching ..."). And third, state the feeling that it generates in the teacher ("... which frustrates me").

### **Humanistic I-messages**

One teacher, distracted by a student who was constantly talking while he tried to teach, one day expressed his feelings quite powerfully: "I cannot imagine what I have done to you that I do not deserve the respect from you that I get from the others in this class. If I have been rude to you or inconsiderate in any way, please let me know. I feel as though I have somehow offended you, and now you are unwilling to show me respect." The student did not talk during his lectures again for many weeks.

Use classroom rules that describe the behaviors you want instead of listing things the students cannot do. Instead of "no running in the room," use "move through the building in an orderly manner." Instead of "no fighting," use "settle conflicts appropriately." Instead of "no gum chewing," use "leave gum at home." Refer to your rules as expectations. Let your students know this is how you expect them to behave in your classroom.

### **Positive discipline**

Praise students frequently. When you see good behavior, acknowledge it. This can be done verbally, of course, but it doesn't have to be. A nod, a smile, or a "thumbs up" will reinforce the behavior.



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**2. Organizing and  
conducting learning  
activities**

Activities that are well-planned, clearly sequenced and presented, and provide for high levels of student success tend to produce a high degree of student engagement. When students are actively learning, they are less likely to become involved in inappropriate behavior. Effective teachers also organize the learning environment to reduce the amount of influences that can disrupt the flow of instruction, whether in teacher-led groups, small workgroups, or during independent seatwork.

The remaining information in this chapter has been divided into five parts, each one focusing on a different aspect of classroom management:

1. Organizing your classroom and the materials in it
2. Organizing your activities in the classroom
3. Organizing student activities
4. Establishing rules and procedures
5. A classroom guide for planning rules and procedures

# Organizing Your Classroom and the Materials in It

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**C**lear guidelines and procedures are necessary from the time the students walk through the door in the morning until they pick up their jackets and leave for home. (See Book 2: Classroom Organization for additional information on planning your classroom.)

## Storing Personal Belongings

**E**xperienced teachers use a variety of techniques for helping students organize their materials. Depending on the availability of materials and space, the following ideas have been useful:

- Use shelf space and divide it so that each student has an assigned section or cubbyhole for his or her materials.
- Provide a plastic tub or wooden tote box for each student. If these containers are uniform in size, they can easily be stacked and stored on shelves, windowsills, above coat hooks, and so forth, and students can take them along as they move to different areas in the room. (One advantage some teachers have using this system is that they can easily take attendance by looking on the shelves, windowsills, etc., to see which tote boxes are left.)
- Students can decorate large ice cream containers, which then serve as cubbies. Cubbies can be lined up along a wall, on a shelf, and so forth.
- Use fruit boxes as storage containers by stacking them on their sides. Students can share if space is limited. Provide students with folders or binders to keep assignments in.
- Make a bound book containing six or eight file folder pockets. To make the booklet, staple five folders together. Tape the bottom and part of the side of each folder to make separate pockets. Each student could have a booklet. Include a place for completed assignments and a place for lost papers.

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## The General Classroom: Curriculum Materials and Supplies

**M**any different approaches have been used by teachers for storing and locating instructional materials. In the multigrade classroom, it is important that these materials be located and labeled so that students can function independently of the teacher. Often, in classrooms organized for individualized instruction, teachers organize materials into resource centers. The following ideas identified during a meeting in 1997 by the Professional Multiage Teachers Association of Western Washington have been used successfully:

- Locate all materials relating to a particular subject in one area of the room. Then, whenever a child wants to work on math, for example, he will know to go to the math center. This system has several management offshoots. If the children work in specific subject areas in the classroom, then it is easier for them to find partners, and it is also easier for the teacher to keep track of who is working on what subjects.
- Divide the classroom into functional areas: a quiet study area, a place for partner work, a place to have discussions, and a place to use audiovisual equipment. Have specific subject resource centers, and then divide the areas by function. For example, have partner and group discussion space in the science and social studies area; have individual and quiet study space in the mathematics and reading centers. (For a visual example of a classroom, see Book 2: Classroom Organization.)
- Hang labeled and color-coded mobiles in each area. A quiet study area could have a sign hanging above the area saying, "Quiet Study Area." Under the area name, rules for the area could also be listed: "whisper voice only" or "no talking, please." For a subject area, a sign could say, "Social Studies Resources" or "Art Area."

The students often enjoy making these mobiles themselves. Some teachers have small groups of children make the mobiles as an art activity during the first few days of school. It is an easy way to involve students in setting up the room or area. In addition, clear labeling can reduce the demands students make on teachers for help.

- Make a quiet area for reading, thinking, and resting. This may be a rug in the corner, a beanbag chair, a cardboard house, and so forth.
- Make an art or project area.

- 
- Provide a special place where students can learn about new individual assignments. This might be a bulletin board tree where students can find new individual assignments written on index cards and pinned on the limbs. Library pockets glued on the outside of a file folder could also be used.

Put library card pockets or hand-made construction paper pockets on a large oak-tag board or corkboard. Student names on the outside of the pockets make refilling easier.

Have a series of file boxes, organized by grade or level, that contain work assignment folders for each student.

- Students working independently must know what to do with their completed assignments, otherwise, the teacher will be handed a variety of projects all day long. Here are some ideas:

Have boxes or file cabinets at the teacher center. Color code or label each compartment to correspond with different subjects.

Specify a cubby or tote box for completed assignments or projects.

Each student could have a folder at the teacher center. When a child completes an assignment, he could put it in his folder and leave the folder in a specified place, depending on what he was going to do next. Bill Radtke, a multigrade teacher from English Bay, Alaska, has developed a system for student assignments. He explains:

*I use a one-drawer cabinet, a fruit box would do fine, and put a file in for each subject area in math, science, English, and social studies. Students then put every assignment into the file. Each night, all files are corrected and papers are placed in an out basket. The students can then pick up their corrected work the next morning.*

- Call students together frequently during the first weeks of school to talk about the advantages of keeping materials organized so that people can find things easily when they want them. Provide positive reinforcement to students for keeping their materials and room areas organized.
- Involve students in the organization of the art and activity centers, subject matter shelves, and so forth. If they help set things up, they are more likely to keep them organized.

- 
- Make up a game that involves points, fun activities, or something your students will like. Give them a score whenever materials areas are especially well taken care of. For example, many teachers have found that students enjoy being read to, and they use this as positive reinforcement throughout the year. Intermediate students can get involved in mysteries, some of the classics, and so forth.
  - Devise a system for sending complete assignments home. Some teachers attach a ditto such as the following example to ensure that the assignment gets home and is discussed. This ensures that every parent is communicated with every week and has an opportunity to be involved with his or her child's education.

**Student's Name:** \_\_\_\_\_ **Subject:** \_\_\_\_\_

**Assignment:** \_\_\_\_\_

**Start Date:** \_\_\_\_\_ **Finish Date:** \_\_\_\_\_

**Comments:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Teacher's Signature:** \_\_\_\_\_

**Parent's Signature:** \_\_\_\_\_

**Student's Signature:** \_\_\_\_\_

- 
- Elect or select student helpers who are to be responsible for certain sections of the room. Rotate these helpers periodically. It is also helpful to schedule cleanup times and post the schedule. Some teachers use card pocket charts that are labeled with the different areas or helper roles in the classroom. Cards with student names are placed in each pocket. Helpers can be rotated weekly.

Linda Pelroy from Arock, Oregon, uses helpers extensively in her multigrade classroom. She shares the following job chart with a description of each helper's role:

### **JOB CHART**

#### **W.W. Jones Cowhand Helpers**

<b>Flag</b>	.....Elisa Eiguren
<b>Calendar</b>	.....Tony Barrett
<b>Librarian</b>	.....Chris Henry
<b>Line Leader</b>	.....Sam Stoddart
<b>Caller</b>	.....Katie Larruesea
<b>Boards</b>	.....Bobby Grenke
<b>Equipment</b>	.....Troy Lequerica
<b>Floors</b>	.....Harold Largent
<b>Books</b>	.....Heather Pelroy
<b>Papers</b>	.....Angelica Benites
<b>Erasers</b>	.....Chris Dent
<b>Computer</b>	.....Raime Lequerica

		<b>Descriptions</b>
<b>Flag:</b>	Student goes to the front of room and says, "Flag salute, please stand. Ready, begin."	
<b>Calendar:</b>	Student tells what yesterday was, what today is, and what tomorrow will be. Example: Yesterday was Tuesday, May 16, 1989. Today is Wednesday, May 17, 1989. Tomorrow will be Thursday, May 18, 1989.	
<b>Librarian:</b>	Checks out books to students and reads a book to others during Story Time.	
<b>Line Leader:</b>	This student receives the privilege of being first in "Line" this week.	
<b>Caller:</b>	This student, at recess time, looks to see who is sitting quietly and orderly and calls them by name to line up at the door.	
<b>Boards:</b>	Student erases everything on the board at the end of the day.	

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<b>Equipment:</b>	Student makes sure that all equipment has been picked up from inside and outside before leaving for home each day.
<b>Floors:</b>	Student makes sure that the floor is clear of paper and trash.
<b>Books:</b>	Student passes corrected books back to the students each morning.
<b>Papers:</b>	Student passes corrected Morning Work Papers back to the students each morning.
<b>Erasers:</b>	Student takes erasers outside and dusts them off, and then brings them back and puts them in the right places.
<b>Computer:</b>	Student copies given list onto computer board each day for that week. Student also makes sure the computer is covered up each day and that the screen is clean for the next day.

# Organizing Teacher Activities in the Classroom

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**A**ll teacher managerial activities require time. When that time is taken from instruction, students suffer. A common example is when the teacher takes attendance while students wait. Another common example, especially important in the multigrade classroom, occurs when individual students need help while the teacher is engaged in instruction with another student or a small group. Without a procedure for managing this incidental help, instructional time can be seriously disrupted.

## Attendance and Other Managerial Procedures

**K**eeping daily attendance and the morning lunch count are a requirement in most schools. Depending on the number of students, these can consume a small amount of time each day. Several suggestions follow that may increase teacher efficiency:

- Prepare a dittoed class list. Students complete their own attendance sheet by drawing a self-portrait or making a check on the space by their name. For lunch count, students can mark an appropriate “yes” box for hot lunch or milk.
- If tote boxes are used, look at the names on boxes left on the shelf. These students should make up the absentee list.
- Set up an attendance lunch count board or pocket chart. Students remove their names as they come in. Students whose names are left should make up the absentee list.

An especially promising strategy for protecting instructional time during attendance and related managerial duties has been identified by a number of multigrade teachers. This popular strategy is the “entry task.” When students first enter the classroom in the morning, after lunch, or any other time, they encounter an entry task written on the board. Troy Smith, a multigrade teacher in Oregon, describes the value, purpose, and procedures for the entry task:

- Entry task is used to develop a mind-set and to maximize the use of time in the classroom. It quickly gets the students ready to enter the learning environment. An entry task has many uses. It can review or help teach a skill.
- When students arrive at school or come in from recess, an entry task notebook is waiting on their desk. The entry task is on the chalkboard ready for the students to begin. They write the date and the task for the day. It may include challenge problems on the board for advanced students. The students know the routine and begin to work immediately. Most of the time an entry task takes about five minutes, thus freeing the teacher for classroom routines such as lunch count.



- 
- The before-school entry task is math. I use review problems because I have found that my students have performed better in math with extra skill review throughout the year. I also use a commercial product called *Daily Oral Language* after recess. The students are given sentences, addresses, and letters written with mistakes. The students make the corrections. Usually I select a student to make the correction on the board. Students then correct their own work. I collect their notebooks every week or so to check their progress.

There are many different types of entry tasks. Some possibilities include:

- Math problems
- Thinking skills
- Language
- Geography
- Silent reading
- Journal writing

## Daily Announcements

In the morning before beginning instruction, some teachers set aside time for making announcements regarding the day's activities and special events. Announcements can be used to facilitate discussion or develop oral language skills if students are invited to become involved. Several examples that might be used are:

- Schedule a daily class meeting sometime during the day. All general classroom business is discussed at this time.
- Post information or write messages on a special area of the chalkboard.

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## Student Strategies for Obtaining Help

One of the problems that multigrade teachers face is providing individual help for students while the teacher is engaged in tutoring or small-group instruction. A successful technique is to develop procedures that clearly spell out what is expected when one needs help and the teacher is busy. These are called “help systems.” Students need to understand that not being able to get immediate attention from the teacher is not an excuse to do nothing. Using a help system can reduce student dependency on the teacher and help build self-direction in students. Several help strategies have been found to be useful:

- Have students use a sign-up system, as shown below, that enables them to be specific about the type of help needed. For example, you could have the following four areas on the chalkboard:

Assignments Completed	Need Materials	Don't Understand	Bathroom

Or you could copy similar forms and keep them at the teacher center or on a bulletin board. By using this format, you can plan your time to meet tutoring needs at the opportune moment.

- Colored cones can be used to signal for help. The student puts a red cone in front of him and continues to work until you come to help. Different colors can stand for a different problem (materials request, not understanding, and so forth).
- Secure a two-colored tag to each desk or table. One side of the tag means “progressing alone” and the other indicates “help needed,” or one color indicates an immediate need while the other color indicates a tutoring need that can be temporarily postponed.

- 
- Larger, two-colored cards may be placed flat on the desks or in a folded “tepee” shape. When the student needs help the teacher can see this cue when scanning the room. Various colors can be used to indicate the need for different types of assistance.
  - Use a card file system for locating peer tutors. File the students’ names under the Subject Area on which they will tutor. Students who are to be “mini-teachers” should be asked to rehearse their methods of tutoring with you. They should understand that a tutor stresses the use of questioning (in contrast to telling), the use of diagrams or manipulative materials, and the use of verbal praise. Ask potential student tutors to observe one of your tutoring sessions after they have discussed tutoring techniques. (See Book 7: Planning and Using Peer Tutoring for more information.)

Robin Lovec, who teaches in a one-room school in Montana, uses a help strategy called the “helping hand.” She has an outline of a hand with a magnet on the back. In the center of the hand she places a picture of the helping student for that day. The hand is placed in a central location in the room. Students needing help go to the person whose picture is on the helping hand. Lovec developed this strategy so her prereading students could get help with written instruction without disturbing the teacher.

# Organizing Student Activities

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**O**ne goal for students in the multigrade classroom is that they become involved in selecting and managing their own educational experiences. Successful multigrade teachers have found it critically important that students learn to manage their own time, make decisions, and evaluate what has been happening to them. Students who successfully manage their time tend to:

- Bring only essential things to school
- Clean out cubicles, lockers, or tote boxes once a week
- Keep multigrade papers in a binder or folder
- Use a planning schedule to help them keep track of what to do

## Guide for Students

**I**t is critically important to establish clear expectations for students if your class is to be successfully managed. Students need to know what you expect in simple but direct terms. In developing a set of guidelines for students, you may wish to involve them. This will help to develop student understanding, motivation, and ownership. However, it is essential that once a list is set up, students are taught the rules and then systematically monitored to determine how well they are working.

When developing a list of classroom rules, it is helpful to begin with one's beliefs or principles about classroom behavior. The following examples of behavior principles, adapted from Kagan (1990), can serve as guidelines for developing a set of classroom rules. By asking students to describe what each principle might look like in terms of action, the teacher can develop a set of specific classroom rules. There are several advantages to this. First, by involving students, the teacher can develop a sense of student ownership. Second, by starting with a set of principles, the teacher can ensure that the rules reflect teacher values.

- Be respectful
- Be courteous
- Be prepared
- Treat others as you wish to be treated
- Try your best at all times

### **Examples of behavior principles**

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Two sets of classroom rules are presented that represent different orientations to classroom life. Set A reflects a generic list of rules a teacher might wish to use for multigrade students while Set B focuses on rules developed to specifically foster cooperative learning workgroups.

**SET A:  
Classroom Rules**

- Follow directions
- Complete all assignments
- Do not leave the classroom without permission
- Keep hands, feet, and objects to oneself
- Be cooperative and helpful to others

**SET B:  
Rules for  
Cooperative Learning**

**Individual Responsibility**

I am responsible for:

**Trying** .....Improvement counts

**Asking** .....Requesting help, and clarification from teammates

**Helping**.....Teammates, classmates, and the teacher

**Filling Different Roles**

- Checker (checking for understanding and agreement)
- Praiser/encourager (praising effort, ideas, help, roles)
- Recorder (recording ideas, decisions, processing, products)
- Taskmaster (bringing us back to the task)
- Gatekeeper (making sure everyone participates; no bullying, no loafing)
- Gofer (getting materials, books, pencil sharpening)
- Reporter (sharing with other teams, the class, the teacher)

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### **Team Responsibility**

We are responsible for:

- Solving our own problems
- Team questions only
- Consulting with other teams and the teacher
- Helping teammates, other teams, the teacher (if asked)
- Inner voice, heard by teammates but not classmates

### **Quiet Signal**

- Hand up, stop talking, stop doing
- Eyes on the teacher
- Signal teammates
- Signal other teams
- Listen

# Establishing Procedures and Rules in Your Classroom

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Careful attention to planning and carrying out plans will make important differences in student learning. Observations of effective teachers have produced accounts of what these teachers do in managing their classrooms. Table 1 and the following set of guidelines for planning procedures and rules for the classroom are designed to be used together. In Table 1, the results of five experimental studies on classroom management are presented. Only those variables that were measured and that demonstrated statistically significant differences in two or more studies have been included. This table provides an overview of general areas of classroom management worth considering when planning for instruction.

**TABLE 1: Results from Experimental Studies on Classroom Management Procedures**

<p><b>Independent Variables</b></p> <p><b>I. Readyng the Classroom</b> a. Classroom ready for school</p> <p><b>II. Planning Rules and Procedures</b> a. Efficient administrative routines b. Uses appropriate general procedures</p> <p><b>III. Consequences</b> a. Rewards appropriate behavior b. Consistent management of behavior</p> <p><b>IV. Teacher Rules and Procedures (first week)</b> a. Signals appropriate behavior b. Presents, reviews, and discusses rules and procedures c. Presents rationales and explanations for rules and procedures d. Rehearsal practice included in presentation e. Teaches rules and procedures well: presentation, review, correctives, reminders</p> <p><b>V. Monitoring Procedures</b> a. Effective monitoring b. Effectively monitors transitions</p> <p><b>VI. Stopping Inappropriate Behavior</b> a. Stops disruptive behavior quickly b. Stops inappropriate behavior quickly c. High percent of students on task</p>	<p><b>VII. Organizing Instruction</b> a. Attention span considered in lesson b. Student success in class lessons c. Appropriate pacing d. Low amount of dead time e. Encourages student analysis</p> <p><b>VIII. Student Accountability</b> a. Monitors student understanding b. Consistently enforces work standards c. Suitable routines for checking and collecting work d. Maintains student responsibility for work e. Monitors progress in completing assignments f. Task-oriented focus g. Plans enough work for students h. Lessons are at a suitable level of difficulty</p> <p><b>IX. Instructional Clarity</b> a. Describes objectives clearly b. Clear directions c. Clear expectations and presentations d. Checks student understanding during directions</p> <p>(adapted from <i>School Improvement Program</i>, 1987)</p>
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# Guidelines for Planning Procedures and Rules for the Classroom

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*(Adapted and revised from Evertson, et al., 1981, p. 28–55)*

## Questions To Ask Yourself

### **I. Inside the Classroom Procedures**

#### **A. Desks, Tables, and Storage**

1. What are your expectations regarding the use of chairs and desks?
2. If students use tote trays for materials, what rules are needed for when and how these areas are to be used?
3. What standards do you want to establish about upkeep of desks and storage areas?

#### **B. Learning and Activity Centers**

1. How many students will be allowed in each area?
2. What rules and procedures will you establish for the care and use of materials?
3. What rules will students be expected to follow for each center in the classroom?
4. What guidelines do you want to establish for when students can use the centers?
5. How will students know what the rules and procedures are?

#### **C. Student Resource Areas: Materials, Books, and Supplies**

1. What are student responsibilities for taking care of these items?
2. What rules need to be established for when and how these areas will be used?

#### **D. Teacher Resource Center (Desk Area)**

1. What rules do you want to establish regarding teacher resources? Your desk area?

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E. Drinking Fountain, Sink, Pencil Sharpener, and Bathroom

1. How many students can be in these areas at one time?
2. What rules do you want to establish concerning when and how these areas are to be used?
3. What cleanliness standards for the bathroom will you set in order to ensure that it is kept clean?

**II. Procedures for Other Areas of the School**

A. Outside the Classroom Area: Bathrooms, Office, Library

1. When and how will students have access to these areas?
2. How will students be monitored?
3. How will students behave in these areas? Get to and from them?
4. What procedures will you establish for lining up and going places as a group (recess, lunch, etc.)?
5. What safety rules do you need to establish for the playground and equipment?
6. What standards will be established for eating lunch (manners, noise level, behavior, etc.)?

**III. Procedures During Whole-Class Activities and Seatwork**

A. Student Participation in Class Discussion

1. How and when do you want students to address questions and responses (e.g., raising hands, calling out, etc.)?

B. Cues or Signals for Getting Students' Attention

1. How will you signal or cue the class when you want everyone's attention (blinking lights, hand signal, bell, etc.)?

C. Talk Among Students

1. What do you expect and desire about noise levels?
2. What cue or signal will you use to let students know the noise level is unacceptable?
3. What procedures and guidelines will you establish for students working together?

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#### D. Making Assignments

1. How will students know what their assignments are?
2. When and how will you give instructions for assignments?
3. How will you monitor progress on assignments?

#### E. Passing Out Books, Materials, Supplies

1. How will students obtain the materials they need for assignments?
2. Will there be materials that must be passed out? What types?
3. Who will pass them out and when will they be passed out?
4. What will students be doing when materials are being passed out?

#### F. Students Correcting and Turning in Work

1. How will assignments get corrected? Will students have access to answer keys?
2. What procedures will you have for turning in assignments? Consider where and when.
3. What rules will you have for turning work in to you while you are engaged in instruction with individuals or small groups?
4. How will you keep track of work completed and turned in?

#### G. Handing Back Assignments

1. How quickly will assignments be returned?
2. What procedure will you use for returning work?

#### H. Makeup Work

1. How will you monitor who misses instruction and assignments?
2. How and when do you plan to have makeup work completed?

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I. Out-of-Seat Guidelines

1. For what reasons can students leave their seats during teacher-directed instruction?
2. For what reasons can students leave their seats during seatwork?

J. What To Do When Seatwork Is Finished

1. What activities are acceptable to do when all work is finished?
2. What procedures will be needed for using extra materials and supplies (e.g., reading books, art supplies, games, etc.)?
3. Will students be allowed to work together and, if so, what will be your guidelines?

**IV. Procedures During Small Groups**

A. Movement into and out of Groups

1. How will students know when to come to their groups?
2. What procedures, rules, and teacher signals (cues) will need to be taught to students regarding movement to and from small groups?
3. What will students do with materials used prior to coming to a group?

B. Bringing Materials to the Group

1. What materials or supplies should students bring or not bring to the group and how will you explain this beforehand?

C. Expected Behavior in Small Groups

1. How and when can students ask questions and give responses?
2. What expectations do you have for how students are to work together and how will you convey your expectations so students learn these?

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D. Expected Behavior of Students Not Meeting in a Group with the Teacher

1. What will the rest of the class be doing while you are meeting with a small group?
2. What do you expect regarding noise levels and student access to you?
3. How will students learn your expectations regarding behavior when not in a teacher group (getting help, noise, leaving the room, etc.)?

**V. Other Procedures that Must Be Considered**

A. Beginning the School Day

1. What routines do you plan to establish for opening each school day?
  - Attendance?
  - Date?
  - Lunch count?
  - Sharing?
  - Day's schedule?
  - Special events?
2. What constraints will affect these routines (e.g., student arrival times)?

B. End of School

1. What routines will be established for ending the day?
  - Homework?
  - Positive feedback?
  - Stacking chairs?
  - Cleaning?
2. Will you use a system of student helpers? What constraints should be considered (e.g., leaving school early)?
3. What standards will you set for student helpers in carrying out their roles?
4. What consequences and rewards will you use for student helpers?

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# Resources

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Canter, L., & Canter, M. (1997). *Lee Canter's assertive discipline: Positive behavior management for today's classroom*. Santa Monica, CA: Canter and Associates.

Lee Canter has popularized an approach to classroom discipline called assertive discipline. His program provides detailed training materials, including lesson plan books, charts, sample rules and consequences, and specific ideas for rewarding positive behavior.

Available from:                Canter and Associates Inc.  
   PO Box 64517  
   Los Angeles, CA 90064

Curwin, R.L., & Mendler, A.M. (1988). *Discipline with dignity*. Alexandria, VA: Association for Supervision and Curriculum Development.

This book presents research-based processes and strategies for developing positive classroom behavior. It begins by focusing on the dignity of the student and recasts the teacher from being a "police officer" to being an individual who mediates learning. Excellent sets of guidelines, observation instruments, and resources are included.

Available from:                Association for Supervision and  
   Curriculum Development  
   1703 North Beauregard Street  
   Alexandria, VA 22311-1714

Evertson, C.M., Emmer, E.T., Clements, B.S., Sanford, J.P., & Worsham, M.E. (1989). *Classroom management for elementary teachers* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

This "how-to" guide provides research-based, step-by-step activities and principles for planning and organizing the elementary classroom.

Available from:                Prentice-Hall, Inc.  
   Englewood Cliffs, NJ 07458

Gaustad, J. (1992, December). *School discipline*. *ERIC Digest 78*.

This monograph describes how to develop a comprehensive discipline program, including many models that can be easily adapted and used.

Available from:                ERIC Clearinghouse on Educational  
   Management  
   5207 University of Oregon  
   Eugene, OR 97403-5207



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Gaustad, J. (1995). *Implementing the multigrade classroom* (ERIC Digest No. 97). Eugene, OR: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED 381 869)

Multiage grouping and related instructional practices such as continuous-progress learning, developmentally appropriate practices, integrated instruction, and cooperative learning are being implemented with increasing frequency in classrooms across the nation. This book identifies important roles and responsibilities for teachers and administrators and promises success—if implementation is carefully and knowledgeably planned. Perfunctory planning that ignores the magnitude and complexity of the change can produce disastrous results.

Available from:               ERIC Clearinghouse on  
Educational Management  
5207 University of Oregon  
Eugene, OR 97403-5207

Grant, J., Johnson, B., & Richardson, I. (1996). *Our best advice: The multi-age problem solving handbook*. Peterborough, NJ: Crystal Springs.

This book reviews the research on classroom management and discipline, provides practical strategies, and presents background information useful to anyone desiring to improve classroom management skills.

Available from:               K-Crystal Springs Books  
10 Sharon Road  
PO Box 500  
Peterborough, NJ 07003

Grossnickle, D.R., & Sesko, F.P. (1994). *Promoting effective discipline in school and classroom* (Rev. ed.). Reston, VA: National Association of Secondary School Principals.

This monograph describes how to develop a comprehensive discipline program, including many models that can be easily adapted and used.

Available from:               National Association of Secondary  
School Principals  
1904 Association Drive  
Reston, VA 20191

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Kagan, S. (1990). *Cooperative learning: Resources for teachers*. San Juan Capistrano, CA: Resources for Teachers.

This resource provides detailed guidelines for planning and implementing cooperative learning in the classroom. Included are references and sample classroom management guidelines.

Available from:               Resources for Teachers  
27134 Paseo Espada #202  
San Juan Capistrano, CA 92675

Miller, B.A. (1994). *Children at the center: Implementing the multiage classroom*. Portland, OR: Northwest Regional Educational Laboratory, & Eugene, OR: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED 376 544)

In a richly descriptive book, Miller examines multiage programs at four elementary schools. Developed by the Northwest Regional Educational Laboratory and the ERIC Clearinghouse, the book shares firsthand insights of teachers and administrators who made the change from graded to multiage classrooms. In addition, it draws upon survey responses from participants in a national multiage conference and offers guidelines for a smooth transition to a multiage structure.

Available from:               ERIC Clearinghouse on Educational  
Management  
5207 University of Oregon  
Eugene, OR 97403-5207

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# **The Multigrade Classroom**

## **A Resource for Small, Rural Schools**



Book 4: Instructional Organization, Curriculum, and Evaluation



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.

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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.



# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.

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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.

# Participants in the Multigrade Conference

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**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaunakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*W.W. Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age interactions through tutoring and shared discovery. Social competence develops

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for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In

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this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.



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# Instructional Organization, Curriculum, and Evaluation

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**T**here is greater diversity of achievement and developmental levels in the multigrade classroom than in the typical single-grade classroom. This diversity creates a greater demand on teacher time. Therefore, teachers often find themselves having to rely more on students to work independently and to help one another than the single-grade teacher. This means that students need to be self-directed, motivated, and responsible learners. They need to be able to help one another, set and complete learning goals, follow teacher directions, and stay on task with a minimum of teacher supervision. Observations of effective multigrade classrooms demonstrate that student behaviors such as independence, cooperation, and self-direction are essential for instructional success. Interestingly, a body of research evidence suggests that student self-esteem and achievement are enhanced by classrooms that facilitate the development of these behaviors (Anderson & Pavan, 1993).

Research on instructional organization, curriculum, and evaluation is immense, and no attempt will be made to review the entire body of material. Instead, several models of instructional organization and evaluation and how they affect student performance will be introduced. These models will aid in determining how to organize classroom instruction and evaluation and analyzing the effect of this instruction on students. In addition, issues relating to scheduling instruction and sequencing curriculum will be presented.

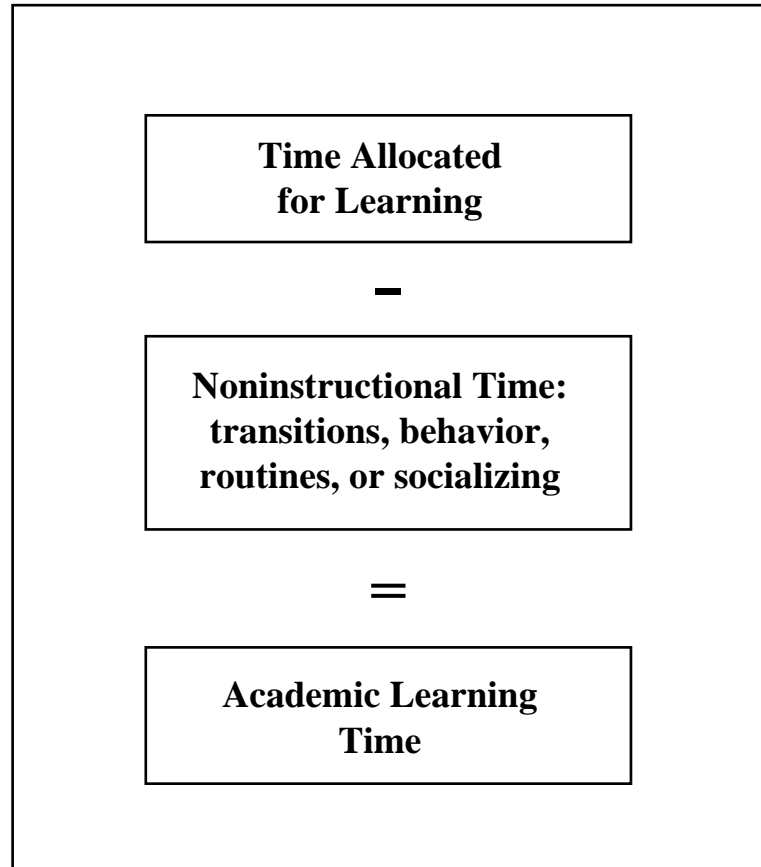
## Time and Achievement in the Classroom

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**R**esearch has demonstrated that the time students spend engaged in learning relates to how much they learn. However, the factors that affect learning time are seldom viewed systematically. For example, how often have you sat down and figured how much time is actually spent on instruction and how much time involves transitions, disruptions, and management? Figure 1 provides an illustration of this question. For example, to determine the actual amount of time devoted to math instruction, a teacher would deduct from the math period the time spent for non-instructional activities such as taking roll, doing the lunch count, finding papers, passing out books, and so forth. What remains is the actual math learning time.

**FIGURE 1. Formula for Determining Actual Learning Time**

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Goodlad and his colleagues, in their observation of more than 1,000 classrooms, documented that about 70 percent of class time is spent on instruction. Of the remaining time, about 20 percent is spent on classroom routines, 5 percent on behavior, and 3 percent on social activities (these figures vary with grade level). These findings are not surprising. However, the variation across schools was substantial: 63 percent to 79 percent at the lower elementary and 63 percent to 84 percent at the upper elementary. This means that the amount of learning a student achieves depends a great deal on the school he or she attends. When Goodlad's data are broken down by subject area and type of instructional activity, the picture is quite dismal.

Table 1 provides an overview of the dominant instructional activities occurring at the elementary level, demonstrating that in traditional single-grade classrooms, instructional activities are dominated by seatwork and teacher talk, with little interactive learning (Goodlad & Anderson, 1987).

**TABLE 1. Average Observation Data on Student Activities  
at the Elementary Level**

<b><u>Activity</u></b>	<b><u>% of Total Time</u></b>
Written work	29.35
Listening to explanation/lectures	19.50
Preparation for assignments	12.70
Reading	5.75
Discussion	4.39
Watching demonstrations	1.96

In Table 1, “Reading” represents the amount of time students spent outside traditional “round robin” reading groups. Clearly, students spent very little time practicing reading outside the context of textbook instruction. This was also the case with writing. Students were seldom observed actually engaged in the composing process. Most written work related to completion of workbook and textbook-related assignments. However, the time allocated for the basic skills areas of language arts/English and math was more encouraging. On the average, Goodlad found that 1.59 hours a day were spent on reading and language arts instruction and about one hour a day on math. But the amount of allocated instructional time tells only part of the story. A more important consideration is the actual time students are effectively engaged in learning (i.e., effective learning time).

Karweit (1987) provides an excellent model for understanding effective learning time. Figure 2 depicts effective learning time as a formula incorporating three key instructional elements: learning time (the actual time used for instruction), quality of instruction (teacher effort and the appropriateness of curriculum and method), and student engagement (student effort and motivation).

**FIGURE 2. Formula for Determining Effective Learning Time**

<b>Learning Time</b>	<b>x</b>	<b>Quality of Instruction</b>	<b>x</b>	<b>Student Engagement</b>	<b>=</b>	<b>Effective Learning Time</b>
60 minutes of math instruction	x	50% of the time instruction is appropriate	x	90% of the time the student is engaged	=	27 minutes effective learning time

In the example presented in Figure 2, it can be seen that this particular student has an effective learning time of approximately 27 minutes (45 percent efficiency). If one thinks about teaching a group of 20 students, ranging in ability across three grade levels, then those students who receive instruction appropriate to their level of ability will spend the most time effectively engaged. However, for those students outside the target range of instruction, minimal desired learning will take place because the quality of instruction and student engagement will be barely appropriate. This is often the case when basic skills are taught to an entire class with a wide range of student ability levels. In such a situation, it is likely that students outside the range of instruction (high- and low-performing students) will not be motivated to learn and may even become disruptive, causing classroom management and discipline problems and further reducing effective learning time. In the multigrade classroom, teachers have successfully dealt with this problem by tailoring assignments to match the unique needs of each student and grouping students where common needs have been identified.

# Summary and Implications

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**T**ime is a crucial element in student learning, but time alone does not produce learning. In this book, a formula was described for determining the amount of learning time (allocated time minus non-instructional time), and a model was presented for understanding the key dimensions of effective learning time (learning time x instructional quality x student effort).

How can this information be used to improve student learning? There are several planning issues where this information can be beneficial. First, if you want to improve student learning, there are three target areas for affecting change: use of time, quality of instruction, and student effort and motivation. This book focuses on the use of time. Second, using the information on time allocation, you can develop a schedule to ensure that instructional priorities are met. There are three general steps to consider in developing an instructional schedule:

1. Determine how much time is available for instruction per day (amount of time students are in school minus noninstructional activities).

Number of minutes students are in school	360
Minus lunch time	<u>-40</u>
	<b>320</b>
Minus recess and break time	<u>-30</u>
	<b>290</b>
Minus dismissal/room duty time	<u><u>-15</u></u>
<b>Available Instructional Minutes</b>	<b>= 275</b>

2. Decide on instructional priorities and allocate the available time accordingly. There are several sources to consider in determining priorities: the needs of students, research evidence, governmental departments of education, and school board policy. The example that follows is based on elementary school data taken from more than 600 schools (Goodlad & Anderson, 1987).

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Subject	Minutes Weekly (Hours)
English /Language Arts	666 (11.10)
Mathematics	230 (3.83)
Social Studies	120 (2.00)
Science	100 (1.67)
Art, Music, Drama, P.E., etc.	260 (4.33)
<b>Total Time: 275 (4.58)</b>	

3. Schedule instruction according to the time allocation for each curriculum area. The sample schedules that follow reflect two different approaches to scheduling. Schedule A describes the school day in terms of the time devoted to each grade and for each subject being taught. Schedule B, on the other hand, focuses on activities and uses much larger blocks of time.

It is important to remember that establishing a schedule for a multi-grade classroom is a very personal process that reflects the experience and training of the teacher and the unique needs of students. There is no “best” schedule. As members of the multigrade conference group on instructional organization point out, “Teachers have many different styles for establishing a schedule. It’s what works best for you (and the students). And remember, it’s OK to change as you learn yourself—most great teachers learn from mistakes.” The sample schedule that follows will provide you with two models to follow. Change or modify them to fit your own unique situation.

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## Multigrade Schedule A for Grades 1–3

9:00	Job Chart, Flag Salute, Calendar, Sharing, Questions Box, and Vocabulary
9:20	Sustained Silent Reading (SSR) or Art
9:40	Pass out papers and correct and return assignments
9:50	Math: Total group lesson presentation and assignments given
10:10	Daily Oral Language (DOL)
10:20	English (Monday, Wednesday, and Friday) and Music (Tuesday and Thursday.)
10:40	Recess                      Language Game
10:50	Morning work (all students review previously taught concepts)
11:00	Computer time begins (a schedule is posted, giving each student 10 minutes)
11:05	Reading Group 1 meets with the teacher. The remaining students work independently on Morning Work or on the computer. If students have problems, they seek help from another student or go on to their next assignment.
11:25	Reading Group 2
11:45	Reading Group 3
12:00	Lunch                      Language Game
12:45	Story or film
1:00	Spelling: Total group instruction with individual work assignments
1:20	Handwriting: Total group instruction with individual work assignments
1:40	Physical Education with the total group
2:00	Science with the total group (Monday and Wednesday), Social Studies with total group (Tuesday and Thursday), Health with the total group (Friday)
2:30	Dismissal

This schedule was developed by Linda Pelroy, a multigrade teacher from Arock, Oregon. It reflects a schedule structured around specific subject areas.



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In this classroom, Pelory meets with different grade levels in small groups for reading, while the remaining students are assigned independent or art tasks. For most other academic subjects, instruction begins with the total group and ends with appropriate individual assignments. An especially important element in this schedule is that students know what will occur during the day.

## Multigrade Schedule B for Grades 1–8

	SUBJECT	PURPOSE	ACTIVITIES
<b>9:00 (30)</b>	Introductory activities	Beginning the day together Building up a favorable working tone	Planning the day s work: singing, music, news, health, poetry
<b>9:30 (65)</b>	Learning center of choice	Intellectual and social development	Free choice activities: center of interest in social studies, science, or health
	Developmental period	Practice language skills	Language through discussion and presentation
<b>10:35 (15)</b>	RECESS / BREAK		
<b>10:50 (60)</b>	Language	Formal and informal instruction in language	Instructional reading and reading activities, language activities and language skills, spelling, handwriting, and printing
<b>11:50 (40)</b>	LUNCH		
<b>12:30 (50)</b>	Mathematics	Improvement of math skills	Whole-class, group, or independent work
<b>11:50 (40)</b>	Physical education		
<b>1:40 (15)</b>	RECESS / BREAK		
<b>1:55 (50)</b>	Social studies, science, health, art, drama, language, sport, gardening	Enlarging students experiences in social studies, science, health, or the arts	Topics may be integrated (or not), with emphasis on individual research and discussion (making notes, records, or charts, etc., could be done in center of interest )
<b>2:45 (15)</b>	ROOM DUTY / CLEAN-UP		

*(Wellington Department of Education, 1984)*

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When developing a schedule, keep several points in mind:

1. Schedules need to be displayed clearly so they will be understood by students.
2. Provide sufficient time for working with each maturity level (primary grade, middle grade, etc.)
3. Ensure that curriculum areas of high priority receive adequate time.
4. Organization is simplest if all grades work on the same subject at the same time (at least initially as the teacher learns what best meets the needs of students).
5. In general, a schedule or routine should make the daily and weekly instructional activities as predictable as possible for students.
6. Don't confuse daily schedules with weekly schedules. Be flexible.

Once instructional priorities are determined and scheduled, it is imperative to focus on what Karweit (1987) has described as *instructional quality* (teacher effort and the appropriateness of curriculum and method) and student engagement (student effort and motivation). In the remainder of this book, we will discuss issues surrounding instructional quality and student effort, paying close attention to how student effort, motivation, and self-perceptions of ability are affected by the choices teachers make regarding learning activities and student evaluation. In addition, the subtle ways students are reinforced by the social and academic structure of learning will be discussed.

# Instructional Quality and Student Effort

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If we had an ideal classroom, one where all students function at the same achievement level and exert a similar amount of effort, it would be easier for the teacher to effectively instruct all students at the same time with similar strategies and materials. However, in the real world, students vary considerably within most single-grade classrooms, and teachers are forced by necessity to deal with different ability levels. In the multigrade environment, differences in ability are even more pronounced, requiring increased planning and organization. The most common strategies for handling differences in ability are whole-class instruction (where differences may often be ignored), ability grouping (where differences often become institutionalized), and pull-out programs (where students are removed from their regular classroom for specific subjects). The research evidence to date suggests that these methods are not necessarily effective, especially for low-achieving students (Banks, 1997).

## Student Effort

Student effort relates to the amount of perseverance and commitment a student brings to a learning task. In the typical U.S. school, students begin in the primary grades believing that their performance and ability are a direct result of their effort. One can imagine a kindergartner responding to a task not completed accurately by saying, “That did not work too good, I will try again.”

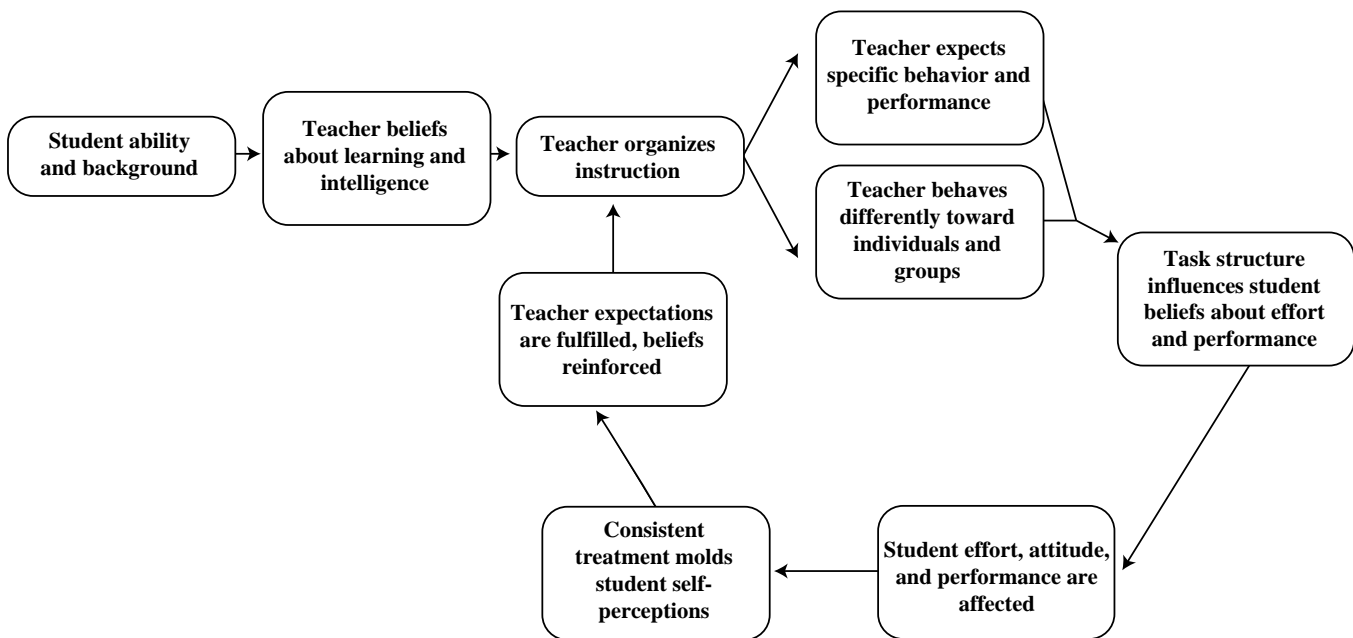
By the time a student reaches the sixth grade, effort, performance, and ability become reversed so that students believe ability is a capacity that affects effort and performance. Ability is viewed as a kind of fixed quantity that determines the degree to which effort can alter performance (Holloway, 1988). In other words, a “smart” student (one with high ability) gets good grades with minimal effort, while the “slow” student (one with low ability) puts out lots of effort with poor results.

For example, a sixth-grade student from a low-performing math group is likely to comment after receiving a poor grade on a test: “Why try? I’m no good at math.” The high-performance student is likely to say, “I received a good grade because I studied and learned the material.” The low-performing student believes effort (how hard “I” try) will have no effect on performance because he or she does not have the ability (i.e., “no good at math”).

Consequently, the low-performing student is not motivated to try. The high-performing student believes that the good grade was deserved because he or she learned the material.

The student who believes that increased effort will have no effect on one's ability to learn will likely be difficult to motivate. Here is where the chief problem lies. The U.S. school as a place for learning helps to develop in students a belief that ability, not effort, is the key to success (Holloway, 1988). Although it may not be a deliberate and premeditated strategy, the type of instructional organization utilized will directly affect student views of themselves as successful learners. Figure 3 provides a model of how the organization of instruction, coupled with the teacher's expectation of students, molds student self-perceptions. Teachers organize instruction based upon their beliefs about student learning. These teacher expectations tend to be fulfilled by students, which in turn reinforces the teacher beliefs about student learning. Thus, teachers' beliefs and understanding of the effects of instructional organization become crucial to the success of learning. Three patterns of instructional organization have been identified by Ames and Ames (1984) as contributing to student perceptions of themselves as learners.

**FIGURE 3. The Effects of Instructional Organization and Teacher Expectation on Student Self-Perceptions**



# The Goal Structure of Different Types of Instructional Organization

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**R**ecent research has focused on the goal structure of different types of instructional organization. Goal structure refers to the way in which instruction is organized to reward student performance. Three distinct methods of instructional organization have been identified and researched by Ames and Ames (1984).

## Competitive Goal Structure

**I**n this organizational structure students receive rewards on a competitive basis with their peers. In a typical competitive classroom, students are engaged in whole-class or small- or ability-group instruction. Learning tasks and activities are generally the same, with minor adjustments made for differences in ability. For example, during math instruction, all students are introduced to a concept and then given a seatwork assignment. All students are likely to be working on identical assignments. Evaluation of student performance is a public activity where students have knowledge of how they performed in relation to their peers. Social comparison information is the primary cue for success.

## Individualistic Goal Structure

**U**nlike competitive goal structures, an individualistic structure places a major emphasis on self-improvement. Students are individually rewarded for gains they make over past levels of performance. This type of organization is characterized by students working on individual learning programs tailored to their unique needs. Usually, some form of assessment has been given to each student. The results indicate areas where the student is performing below a given standard. When a student can achieve to the standard, he or she is rewarded with successful completion. In this setting, it is likely that students would be working on different assignments and activities at the same time. Student success is based on individual comparisons with past and present performance, not on a comparison with other students.

---

## Cooperative Goal Structure

**C**ooperation is the third type of goal structure. It differs from both the competitive and individualistic patterns of organization because it emphasizes a positive interdependence among students for success or reward. Students depend on each other for task completion. Research evidence demonstrates that cooperative strategies enhance student self-concept and motivation (Bouchard, 1991; Pavan, 1992; Stone, 1995). Many teachers use cooperative learning strategies. In art class, the teacher might form the class into small groups in order to complete a group mural that depicts a theme in social studies. Less common are cooperative strategies used in academic areas such as reading and math. However, recent trends toward cooperative learning have generated a number of highly effective “packaged” training programs (see the Resource Section at the end of this book for more information).

In many multigrade classrooms, teachers have learned to rely primarily on individualized and cooperative learning because they are natural outgrowths of the way rural multigrade classrooms are organized. Students learn to cooperate and depend on one another and to work on tasks tailored to their individual needs. The teacher encourages and utilizes cooperation among students in order to extend learning. However, there is also a tendency to rely on competitive structures because they are the dominant educational practice beginning teachers learn.

Multigrade conference participants who worked on instructional organization identified a set of advantages and disadvantages for each goal structure, along with a list of their appropriate instructional uses. Table 2 on the following page presents an overview of their ideas.

**TABLE 2. Advantages, Disadvantages, and Applications  
for Three Classroom Goal Structures**

<b>Competitive Goal Structure</b>		
<b>Advantages</b>	<b>Disadvantages</b>	<b>Application</b>
Reflects structure of society Familiar to students Familiar to teachers	Produces winners and losers Can lower self-esteem	Some sports activities When competing against oneself or an external goal
<b>Individualistic Goal Structure</b>		
Can improve self-esteem Students can work at their own level and pace Students compete only against themselves	Increased amount of teacher preparation Students may not know how they stand in relation to others	When there is a wide range of ability To maximize student potential
<b>Cooperative Goal Structure</b>		
Students learn to cooperate Develops feelings of belonging Increases peer interaction and learning	Must teach cooperative skills Some students may not put forth maximum effort High-performing students may dominate cooperative groups Slower students slip by without producing	Group projects To tie a group together and form bonds When there is a wide range of abilities



# Matching Instructional Organization With the Needs of Students

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Teachers faced with a classroom of students must learn to balance the needs of students with the time and energy necessary to meet those needs. A body of research on teaching and instructional organization describes practices and strategies that have proven effective in striking this balance. In so doing, this research has also illuminated a sobering reality that many instructional practices believed to be good for students may have undesirable effects on student efforts to learn. As discussed earlier, the shift in student attitudes from a belief that effort makes a difference in learning to a belief that only ability counts is a case in point. The good news is that the multigrade classroom, with its flexible structure and cooperative learning climate, appears to provide an ideal environment for counteracting this damaging tendency. Why the multigrade setting may facilitate student effort will become clearer as we review the effects of instructional organization on students.

In structuring the classroom for instruction, teachers nearly always use some form of grouping (the one exception may be a completely independent study program). Either they teach to the entire class (whole-group instruction), or they configure the class into different types of groups. For what purpose are different forms of group structure used?

Traditionally, grouping has served a management purpose in classrooms. In a similar fashion to the early evolution of the graded school, grouping has served as a means of sorting and organizing students into manageable units for efficiency purposes. An underlying belief is that instruction will be more effective with smaller numbers of students grouped by ability. However, studies of ability grouping have clearly shown that the liabilities for low-achieving students may often be substantial and, except for mathematics, ability grouping does not appear to serve any advantage for students (Slavin, 1988). The only exception may be in those cases where groups are temporarily formed for specific purposes such as peer editing.

Bossert, Barnett, and Filby (1984) developed a model for describing the different patterns of instructional organization commonly found in schools along two continuums: activity structure (students engaged in the same activity versus engagement in different activities) and student work relationships (students working independently versus working interdependently). Table 3 illustrates these two dimensions.

**TABLE 3. Typical Classroom Instructional Activities**

<b>Work Relationships</b>	<b>Activity Structure</b>		
	Same <-----	----->	Different
Independent	(1) Whole-class worksheet	(2) Separate reading groups	(3) Separate individualized program
Interactive	(4) Whole-class with cooperation	(5) Separate reading groups with cooperative tasks	(6) Common individualized program
Interdependent	(7) Common group projects	(8) Common group projects	(9) Coordinated group task

The following examples (which correspond to the numbers for each classroom activity) illustrate the kinds of tasks students would commonly be engaged in:

1. A common worksheet for a class, where students must work alone and are graded individually
2. Reading groups with different textbooks, where students within each group complete identical assignments individually
3. An individualized program where all students are expected to complete the same assignments independently but at different rates
4. Whole-class recitation or a common worksheet, where students are allowed to interact, but each child completes a separate worksheet
5. Reading groups with different textbooks, where students can interact while completing their separate but identical assignments
6. An individualized program where students may work together on assignments, but each child must produce a separate product
7. Small groups or the entire class work on a common assignment, and individual products are not demanded
8. Different groups within a class do different assignments, and a group product, not individual products, is required
9. Different roles (either within small groups or the entire class) for students that require coordination to produce the joint product

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Activity 1 (whole-class worksheets) illustrates a situation where students work independently from one another and are dependent on the teacher for direction, instruction, materials, and reinforcement. Such dependency counters the need for student self-direction and independence required in the multigrade classroom. In addition, students all work on the same task; thus, there is only one dimension for demonstrating competence (i.e., speed and accuracy of worksheet completion). On the other hand, Activity 9 reflects a learning situation where students work in small groups and are highly dependent on one another because they must produce a joint product. Further, students do not all do the same thing, but have an opportunity to demonstrate competence and achieve success in a variety of roles (writer, illustrator, researcher, etc.) and activities.

## The Unidimensional Classroom

**T**raditional classroom organization resembles those dimensions closest to Activities 1 and 2. Classrooms consistently organized to promote Activities 1 and 2 create powerful norms that are quite problematic for many students, especially for those achieving below grade level in reading (Clark, 1996) and those of a minority group status (Caine & Caine, 1991). This form of instructional organization has been characterized as unidimensional or single ability. Alternative instructional organization patterns have been successfully implemented that counteract the negative effects of the single-ability learning environment. Table 4 describes the characteristics and norms associated with these two dimensions.

**TABLE 4. Comparison of Teacher and Student Norms in Unidimensional and Multidimensional Classrooms**

<b>Classroom Norms</b>	<b>Unidimensional Classroom</b>	<b>Multidimensional Classroom</b>
Belief About Student Ability	Competence and ability are viewed along a single dimension where ability is treated as a fixed entity. Some students possess the ability for high academic performance while other students only have low-performance ability.	There are many different dimensions to ability. Every child can demonstrate competence and ability on some instructional task. Therefore, many different tasks are used.
Teacher Role	Presenter of curriculum content, grader of student accomplishment, manager of resources, and controller of student behavior.	Problem solver, tutor, and facilitator, who promotes all children to achieve learning objectives and to excel across a broad range of competency areas.
Learner Role	Listen, respond, study, and take tests.	Study, participate and discuss, take tests, lead groups, problem solve, and tutor.
Basis for Determining Competence	Reading ability is used as the primary gauge of competence and ability.	Competence and ability are recognized in a variety of areas. Students demonstrate competence in reasoning, art, music, idea generation, cooperative group skills, etc.
Task Structure	A narrow range of activities is used for learning. These activities are whole-group instruction, independent study, seatwork, or small, stable ability groups.	Wide range of different activities for learning where students can demonstrate a variety of competencies. This includes individual, pair, and small-group and large-group activities.
Learner Assessment and Evaluation	Grades are arbitrarily curved and normally distributed, which ranks and labels learners. Evaluation is highly visible and comparative.	Focus is on identifying student performance strengths and needs across a wide variety of instructional areas and tasks. Growth is measured by skill mastery, and evaluation procedures are private and individual.
Effects on Learners	For lower-achieving students there is a negative effect on self-concept, motivation, and work effort. High achievers are reinforced and given greater opportunities to learn. Students also develop a dependence on the teacher.	Student academic self-concept, sense of efficacy (personal control), achievement, and motivation are enhanced. Students learn that everyone has ability and can demonstrate competence in some area. Self-direction and independence are developed.

In the unidimensional classroom, single-task learning structure and evaluation procedures combine to produce a view of academic ability based on student comparison and consensus (i.e., competitive goal structure). This social comparison tends to produce feelings of inferiority, low aspirations, lack of motivation, interpersonal hostility, and competitiveness in low achievers (Marshall & Weinstein, 1984). A process occurs in these competitively structured classrooms that produces “losers” and “winners” and generates a status system that favors students with the highest reading ability. In other words, students who read the best are seen as being of the highest ability; they receive positions of high status in the classroom.

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Even when high-status students are placed in different subject-area groups (e.g., math, science, or social studies), they are viewed by fellow group members as having the most ability (“being the smartest”). In mixed-ability groups, higher-status students (usually determined by reading ability) receive the greatest opportunities to learn, regardless of the subject matter. They do this through dominating discussion and by being credited with high-ability status by fellow students (Cohen, 1986; Rosenholtz, 1979). A main reason for this dominance is the place accorded verbal skills in conventional school curriculum. As Rosenholtz points out:

*Conventional curriculum taps a very narrow range of skills, concentrating almost solely on reading and verbal skills, such as speaking and writing, yet rarely emphasizing alternative intellectual abilities in art, athletics, creativity, and thinking (p. 78).*

As a result, learning opportunities for lower-performing students are significantly curtailed.

## The Multidimensional/Multiability Classroom

**E**lizabeth Cohen (1980) provides an excellent definition of the multidimensional/multiability classroom:

*A multidimensional/multiability classroom is one in which there are many dimensions of intellectual competence. No individual is likely to be treated highly on all these dimensions. Thus there are no students who are generally expected to be incompetent at new tasks and no students who are generally expected to be superior regardless of the nature of the task. In a multidimensional/multiability classroom, one's skill in reading represents only one important competence; it is not an index of general expectations for success at all classroom tasks (p. 231).*

In the multidimensional/multiability classroom, there is a shift in both student and teacher roles that is designed to increase learning opportunities and successes for all students. This is accomplished, in part, by changing and/or expanding instructional strategies to include cooperative work groups where students learn from each other and by increasing the array of areas where students can demonstrate competence. Marshall and Weinstein (1984) identify four components of task or activity structure that enhance student self-perceptions and performance:

1. A variety of tasks occur simultaneously:
  - Variety in the tasks allows students to demonstrate their ability in several areas rather than along a single dimension. Variety allows students to feel competent in some areas.

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- Task variety reduces social comparison because evaluation is less visible.
2. A divergence in the process and products of the task:
    - Divergent process is made up of tasks that can be pursued in a variety of ways.
    - Divergent products have no specific right answers; results may be good in different ways. This allows for a variety of student experiences of success. Divergent tasks reduce the basis for comparative evaluation.
  3. Differences exist in the sequence and pace of tasks for different individuals:
    - Completion time requirements (pace) can harm the effects of divergent task activities if students are required to complete their tasks at the same time (i.e., those completing first are smarter).
  4. Level of task difficulty and content coverage varies:
    - Varying the amount of content and the difficulty of content for different students can communicate comparative evaluation information. (Students perceive that high achievers receive harder work.)
    - Comparison can be reduced if the teacher conveys the belief that everyone is learning, but at different paces and in different ways.
    - Teacher expectations of ability tend to convey a belief that ability level determines the quality and quantity of tasks assigned. When this is made public, students internalize the values and judge their own ability. Low-ability students get easier tasks and more of the “same stuff.”

# Implications

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**H**ow can this information on task structure, evaluation, and student status differences be of use to the multigrade classroom teacher? What norms should a multigrade teacher attempt to put in place? What instructional organization appears to be best for multigrade students? And what can the teacher do to implement the most beneficial instructional organization for students?

Clearly, there are no simple answers to these questions. In the multigrade setting, the need to balance teacher time and efficiency with the best interest of students is a continual struggle. The implications of the research information reviewed thus far tends to strongly contradict the dominant organization typically found in many single-grade classrooms. This research tends to support the successful practices reported by many multigrade classroom teachers. In other words, interdependency, cooperation, multiple task activities, individualized learning, and heterogeneous grouping appear to have emerged out of the requirements of coping with multiple grade levels in a single room. This viewpoint was substantiated by the majority of teachers participating in a 1989 multigrade conference held in Ashland, Oregon. Barbara Robinson from Arbon, Idaho, reported that she quickly modified the traditional grade segregated groups in favor of cross-grade grouping because it provided for more instructional flexibility.

However, the norms characteristics of the “unidimensional” learning environment are powerful forces that have shaped the ways in which many teachers organize instruction, even in a multigrade setting. Recent research on effective teaching and instructional organization strategies describe classroom practices that appear to consistently counteract these forces (see Cohen, 1986; Marshall & Weinstein, 1984; Rosenholtz & Simpson, 1984).

# Task Structure and the Effective Teacher

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Several factors play a role in determining whether an organizational structure (whole-class, small-group, etc.) enhances student learning. Teacher awareness of effective teaching practices and the ability to apply them to different organizational structures can overcome some of the inherent limitations of a particular structure. For example, in whole-class instruction there is a tendency to call on those students who are the brightest (selective attention). This reduces the opportunity to learn for slower and average students. An effective teacher might allow for cooperative student responses (students respond in pairs), request responses from a wide variety of students, give students time to think before they answer (wait time), or have every student write out a response.

Other examples that are especially relevant to the multigrade environment are the characteristics of the learning activities and the grouping structure used to apply them. There are two general activity categories teachers must consider. First are those convergent or closed learning activities with only one correct answer, such as completing a math problem (e.g.;  $3 + 4 = \underline{\quad}$ ;  $9 - 4 = \underline{\quad}$ ;  $24/5 = \underline{\quad}$ ), a workbook page in reading (e.g., circle the word that means  $\underline{\quad}$ ); or engaging in recitation with the teacher on the names of countries in western Europe. Given the range of abilities in the multigrade classroom, it is quite difficult to use closed activities with the entire classroom of students. In addition, closed activities allow for greater evaluative comparison. Students can quickly judge who is right and who is wrong.

Divergent or open-task activities have no single correct answer, but provide students with the opportunity to respond to the task in their own unique way and at their own level. Table 5 provides an overview of nine common instructional structures, along with an example of a language arts task. Writing a letter to a friend, brainstorming a list of words to be used in a story, or describing a favorite story character reflect divergent or open tasks. Using these types of tasks, the multigrade teacher can plan a whole-class instruction for a wide span of ability levels. Divergence also benefits students because it makes comparative evaluation difficult. Since there is no one correct answer, students cannot judge their success by the failure of their neighbor or by how quickly the same answer was achieved. But one should not equate divergent tasks with a lack of standards. In writing, for example, a teacher may establish standards for clarity, format, or length, but still encourage a divergence of thought and expression.

It is important to realize that no task structure is better than another, but that each has a specific use depending on the learning goals, composition of students, and how instruction is organized (cooperative work-groups, individualized instruction, etc.). In fact, effective teachers often use both convergent and divergent structures within the same lesson. In addition, the amount of comparative evaluation likely to occur is indicated in parentheses.



**TABLE 5. Appropriateness of Organizational Structures for Student Learning Activities Using Language Arts Goals as Examples**

<b>Structure</b>	<b>Convergent (single correct answer)</b>	<b>Divergent (multiple answers)</b>
Whole-class (same assignment/task)	Every student memorizes the same list of adjectives and writes down their definitions. (Strong comparative evaluation; inappropriate with multiple levels.)	Each student writes down 10 descriptive words. These are compiled into a word bank and stories are written.
Whole-class (same)	Every student works with a neighbor to memorize the same list of descriptive words. In pairs, students cooperatively write definitions. (Strong comparative evaluation; inappropriate with multiple levels.)	Each student writes down six descriptive words and then trades three words with a neighbor. Students then use each word in a sentence and read to their neighbor.
Ability grouping (w/out cooperation)	Each ability group has a different set of descriptive words to learn. Students work independently, writing the meaning of each word using the dictionary. A worksheet is then completed using the words. (Strong evaluative comparison within group.)	Students find five descriptive words they like from their reading text. A word bank is created. Students independently write a story using words from the word bank.
Ability grouping (w/cooperation)	Students work together to define a set of descriptive words and to complete the teacher worksheet. Each group has a different set of words based on reading levels. (Moderate evaluative comparison within group.)	Students brainstorm a descriptive set of words to be used in a story. Students then begin a "round robin" story using the words from the new word bank.
Separate individualized instruction (same assignments, different pace)	Students complete a set of lessons on descriptive words at their own pace. Student A is working on lesson #2 (defining words) while Student B is on lesson #5 (sentence completion worksheet). (Moderate evaluation based on pace.)	Student A completes lesson #2 (picking descriptive words from a story and using them in a letter to a friend) while Student B completes lesson #5 (writing an advertisement using words from the word bank).

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Structure	Convergent (single correct answer)	Divergent (multiple answers)
Common individualized instruction (cooperation w/different products)	Students A and C work together to memorize the descriptive words in lesson #2. They work together to complete a crossword puzzle using their new words. Each turns in a separate completed lesson. (Some evaluative comparison may occur.)	Students A and B work together, editing each other's story. Stories are rewritten.
Common group project (common assignment w/group product)	Students all read the same story and complete a worksheet together on descriptive word definitions.	Three separate groups are required to complete the same assignment. After reading a story without an ending, students write a new ending using the class word bank.
Group product (different groups and assignments w/group products)	Three separate groups complete different sets of worksheets on descriptive words. Group A turns in one set of completed worksheets that include sentence completion, crossword puzzles, and word definitions. (Little comparative evaluation.)	Three separate groups complete different assignments. Group A produces a word bank of adventure story words.
Coordinated (within) group (multiple groups with different roles within groups and common products for each group)	Group A defines a set of 10 words and completes a sentence-completion worksheet and a crossword puzzle using the new words. Roles are assigned: researcher defines words, editor corrects writing errors, poet completes sentence. (Little comparative evaluation.)	Group produces a historical newspaper about the first explorations of North America. Students are assigned different roles: reporter, editor, printer, designer, and artist.

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## Strategies for Instructional Organization

**E**ffective strategies have been implemented to counteract the negative effects of organizing instruction along a single-ability dimension. Both students and teachers are trained to view ability as multifaceted, not a fixed entity possessed by only a few. In the traditional single-ability classroom, reading is generally viewed as a prerequisite for all other tasks. Few activities are offered where other forms of ability, such as reasoning, decision-making, idea development, and observational skill, can be tested and verified (Rosenholtz & Cohen, 1983). Cohen (1980) identifies three key areas for altering unidimensional classroom structure in order to change student and teacher views of intelligence and ability: increasing learning opportunities, increasing opportunities for success, and changing evaluation practices. The following guidelines, adapted from Cohen, provide a set of practices for planning multiability activities:

### Altering Existing Practice

**I**n order to alter existing practice, three important instructional variables must be considered:

- I. Opportunities for active academic participation. This can be accomplished by:
  - A. Using heterogeneous small groups rather than large groups.
  - B. Using guidelines for equal participation of all members of small groups.
  - C. Using leadership roles and opportunities for all students in small groups. (Grouping strategies are discussed in greater detail in Book 5: Instructional Delivery and Grouping).
- II. Opportunities for success on academic tasks can be increased for all students by expanding the definition of ability and competence through:
  - A. Using academic tasks requiring multiple intellectual abilities.
    1. Try using multimedia activities that accommodate individual learning styles.
    2. Try publicly defining the separate intellectual skills required for completing given tasks such as reasoning, observation, creativity, and so on.

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3. Try role playing.

B. Individualizing in conventional academic areas, thereby allowing students with weak skills to work on tasks that are not too easy and not too difficult.

C. Having small groups share skills so that the student with specific skill problems is not prevented from attaining success on tasks.

III. Pay special attention to evaluation procedures that produce damaging evaluative comparisons by:

A. Making infrequent use of marks and grades that allow comparison between individuals on a single dimension.

B. Providing systematic, individualized feedback to each student on how well he or she is attaining objectives and which particular skills require further work.

C. Avoiding public evaluation in recitation.

D. Avoiding standardized tasks that make comparison easy on how well or fast a student is completing the task.

E. When using groupwork, evaluating the group product rather than the contribution of the individual to the group.

# Curriculum

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**D**iscussion has focused mainly on how different instructional practices affect student performance and self-perceptions of learning. It was found that consistent whole-class instruction and inflexible ability grouping tend to emphasize competition through public comparative evaluation practices. In these types of learning environments, student ability becomes quickly stratified along a single dimension where reading performance generally reflects the primary index of competence. Unless effective teaching practices are implemented to counteract this prevailing trend, students, especially lower-achieving ones, will be negatively affected. On the other hand, individualized programs and cooperative workgroups place major emphasis on personal growth and group performance, thereby increasing student opportunities for demonstrating competence and improved peer relations. The following sections will focus on instructional organization within the context of curriculum, describing the elements and responsibilities of curriculum organization.

## The Hidden Curriculum

**W**hat has been presented thus far reflects an area of schooling often referred to as the “hidden” or “unstudied” curriculum. This includes such areas as tracking and grouping practices, scheduling and the allocation of time, disciplinary practices, the physical environment, school norms and values, and human relationships. These areas of schooling are hidden because they affect student learning in powerful, but often unintended, ways. We also influence how students learn to relate to each other and the teacher in accomplishing tasks—a social norm that the students may well carry with them throughout their adult lives. As educators, we need to become aware of the hidden curriculum and its effects on students, and consciously modify these practices to enhance student learning.

The remaining curriculum is referred to as the studied or planned curriculum and can be divided into two general areas: essential learning skills and enrichment. The following section will focus on the planned curriculum, providing a brief overview of its structure and basic planning consideration for use in the multigrade classroom.

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## The Planned Curriculum

The “planned” curriculum can be described as consisting of four key elements: goals, resources, activities, and assessment. Translated into teacher terms, curriculum can be described as a series of questions:

- What do students need to know?
- How will I help them learn it?
- What resources will I use?
- How will I know if the students have learned it?

Table 6 provides an overview of these four questions in terms of curriculum levels and responsibilities generally found in most school districts.

In larger districts and schools, all curriculum levels, from philosophy to assessment, are often clearly defined. The single-grade teacher in a metropolitan school district would likely be required to follow a specified set of goals and learning objectives while using district-adopted materials and tests. Multigrade teachers, on the other hand, may often find themselves in the role of answering these questions with little guidance from a central school district or governmental agency. Even in those cases where the state or a central educational service district provides guidance for the multi-grade school, isolation and small size will often reduce the amount of direct service. Even more confounding, curriculum goals, guides, and texts are conventionally organized by “grade level,” placing the teacher in the dilemma of how to achieve expected learning goals when the instructional organization may well be inappropriate. Rural multigrade teachers often find themselves operating on their own.

**TABLE 6. Overview of Curriculum Levels and Responsibilities**

<b>Curriculum Level</b>	<b>Grade Level</b>	<b>Example: Language Arts</b>	<b>Responsibility</b>
District philosophy and purposes	All grades	All graduates will read, write, and speak effectively.	Community and school board
Curriculum	All grades	Writing: The student is able to write out of his own experience, internal as well as external.	Department of education, community, school board, administration, and teachers
Learner	Grade specific	Grades 1 2: The student is able to write a complete sentence. The student can write two or more related sentences.	Department of education, community, school board, administration, and teachers
Resources (guides, texts, handouts, etc.)	Grade specific	Grades 1 2: Curriculum guide, daily writing journal, textbook, and teacher-developed materials.	Administration and teachers
Methods and activities	Grade specific	Grades 1 2: a) Students complete sentences with the teacher. b) Students orally give examples of sentences to the teacher. c) Students write sentences in their writing journals.	Administration and teachers
Assessment	Grade specific	Grades 1 2: Sentence completion, review journals, or oral review.	Department of education, community, school board, administration, and teachers

# What Do Students Need To Know?

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**W**hen a teacher enters a classroom with a new group of students, the teacher's most pressing concern generally revolves around determining what the students already know and what they may need to learn. Ideally, there should be student records that provide an overview of individual student progress. These generally include standardized achievement test results, report cards, and diagnostic testing information for reading and math programs. However, this type of information is not often kept systematically. In addition, if students are returning from a summer vacation, they may have regressed from the previous year's testing.

The best way to determine what students know is through direct assessment:

Conduct an interest survey or conduct interviews. Learn the types of learning students find motivating. Students can also tell what textbooks, learning kits, or instructional materials they worked with the previous year. Students are an often overlooked source of firsthand information.

Set up learning activities where you can watch how students perform in different subject areas and how they relate with peers. Make note of what you learn.

Using grade-level placement information gathered from student records, as well as other information sources (such as colleagues or the community), plan lessons for diagnostic purposes. These might include writing activities, completing a series of math problems, or individually reading to the teacher. Results from these lessons can be used to determine student strengths and needs. Basal textbooks generally include diagnostic materials for placement purposes.

When planning for diagnosis, it is important to set curricular priorities. In other words, what content is essential for all students to master, and in what order?

If the district has established learning goals or adopted a curriculum, then these can be used to guide your decisions. However, if there do not appear to be any established guidelines, then you should use what classroom resources you can find and work with community members to help identify goals they have for their children. There are many curriculum guides developed by state departments of education that may be obtained by contacting them directly or by using ERIC (Educational Resources Information Center) to find curriculum guides and curriculum models. Finally, do not forget to use your own common sense to decide what the students need to learn.

**Talk to students**

**Observe students  
working and interacting**

**Use diagnostic  
procedures**



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## How Will I Help Them Learn?

**D**etermining how you plan to organize your classroom for instruction and the types of activities you plan to use will depend on many factors. What materials are available? What different levels will you be teaching? How many students will you have? Will you have adult help? What strengths do you bring to the classroom? It is also important to ask what methods and strategies are likely to be the most effective.

Many excellent resources have been written on effective teaching. Several of these have been listed in the Resources section at the end of this book. However, it is safe to say that a sound principle to follow in developing instructional activities is that “demonstrating” or “discovering” is better than “telling.” Students learn best when they can see and directly experience the desired learning, then follow it by opportunities to practice. This holds true for social as well as academic goals.

## What Resources Will I Use?

**O**ne of the first tasks upon entering a new classroom is to take stock of what resources are available. The following guidelines provide an outline of ideas for collecting and assessing curriculum materials:

1. Determine what the school has that you can use:
  - Workbooks (old or new)
  - Worksheet masters
  - Textbooks (old or new)
  - Idea/activity books
  - Learning kits
  - Any type of hands-on materials
2. Determine whether there is any discretionary money for buying materials
3. Ask other school personnel what resources may be available
4. Check the local library for books, magazines, and Internet sites that will go with units of study
5. Examine teachers’ manuals and note worksheets, games, devices, or other suggested learning activities

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6. Collect materials that may be of use (such as magazines, maps, wallpaper books, carpet squares, milk cartons, etc.)
  7. Look for simulations, games, and other social/interactive learning activities, especially in social sciences
  8. Robin Lovec, a multigrade teacher from Montana, says she finds lots of useful materials at garage sales

# Evaluation: How Will I Know If the Students Have Learned?

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**T**he last area of curriculum is evaluation. Unlike diagnosis, where the aim is to determine what students need to know, evaluation focuses on ascertaining whether students have learned what they were taught. Assessment should be considered an ongoing activity, occurring at each phase of instruction. When you measure student progress toward achieving a goal, you are also assessing how well you taught or organized instruction. The results of your evaluation should become the basis for altering the course of instruction.

Ideas about evaluation in multigrade classrooms rest on several premises. The first is that if students and teachers remain together for several years, teachers are able to ascertain what students know and do not know well, how they learn, and the best ways to teach them. The second premise is that if students progress through the curriculum less restrained by chronological age, then evaluation should accommodate their current knowledge and their need to grow. Evaluation systems should track students' long-term learning within and across subject areas. This entails multilevel assessments, informal and formal peer modeling by older students, and challenging activities and assessments.

Based on the above premise, three multigrade teachers in Alpharetta, Georgia, identify and describe three significant metaphors that should describe the intent and extent of evaluation in a multigrade classroom: evaluation as a spiral over time, as a web across subject areas, and as a bridge to reach students' perspectives of what they are learning.

## Spiral Evaluation

**T**he goal of spiral evaluation is to examine long-term learning over a three-year span. There are two ways in which evaluation "spirals." First, there is an upward spiral toward more conceptual complexity. Second, by revisiting certain aspects of the curriculum each year, students will experience long-term learning. By using spiral evaluation, teachers and students know what has been taught and learned over a three-year time span. There are three years to work toward transfer of concepts, information, and skills to new situations.

Spiral evaluation also has a positive impact on students' sense of security and the development of leadership. "Old" students (seventh- and eighth-graders) can explain a concept from the prior year to "new" students (sixth-graders). For example, older students this fall explained to the incoming sixth-graders the multiple purposes of our Agri-habitat and demonstrated how to work in the gardens. The old ones felt comfortable sharing what they had learned. They were mentoring at the same time that they were reviewing and determining what they knew. One of our purposes for evaluation is to help students become "lead-learners."

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## Webbed Evaluation

**M**ultigrade, multiyear, interrelated curriculum also means that learning should be evaluated across the curriculum. Teachers should conceive of their curriculum and the evaluation of student learning as a “web” that crosses the hall from classroom to classroom. The web unites teachers in a common effort to secure student understanding in many contexts.

For example, writing skills are evaluated across the curriculum in every subject area. Spelling words in language arts are taken from other subjects, and examples of sentences for learning new writing skills are taken from social studies texts. Math word problems frequently relate to information from social studies and science.

## Bridged Evaluation

**T**he bridge represents a means of understanding students' perspectives; we are trying to evaluate what students believe they are learning, and how they are learning, over the three-year program. Bridges to student understandings are built on day-to-day interaction. Bridges are also erected through the systematic collection and analysis of research data.

For example, one set of our data involves student performance on standardized tests. We analyze national Iowa Test of Basic Skills scores and state Curriculum-Based Assessment of Writing Skills, both general and within certain domains of writing. We also survey students' attitudes toward school, other students, and the curriculum; hold large- and small-group discussions with students to gain a picture of what the students value and whether they support our program's goals; and collect, analyze, and respond to student journals. Together, we analyze data and write up what we have learned, and then determine how to change what we do.

Learning from assessment requires the willingness and the courage to examine your own effectiveness. It especially matters to a multigrade team that they know how to spiral, web, and bridge assessment practices. Students' academic shortcomings cannot be blamed on some other anonymous teacher; for three years multigrade teachers are responsible.

Montana multigrade teachers attending an Elementary and Secondary Education Act (ESEA) workshop on new state mathematics and reading standards submitted the following ideas related to student assessment. They suggest that teachers consider many different strategies and issues, among them:

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- The commitment to the idea of natural assessment, which means that multigrade teachers attempt to integrate learning, teaching, and evaluating into daily activities.
  - Opportunities for informal and formal evaluation for children to express themselves.
  - Use of student self-evaluation and self-direction. Students set personal academic goals, guide teachers in developing curricula, help to direct the course of thematic studies, engage in research, and decide what individual work to do during their investigations, communications, and math workshops. Students develop into independent, self-motivated learners as they discover how to make appropriate choices for themselves and assume ownership of their classroom.
  - Use of evaluation strategies that look at the environment, the teacher, and the materials, as well as the child.
  - A look at the concept of uniformity versus diversity. Do the materials (books, basal, etc.) enhance uniformity or diversity? Is there uniformity or diversity among the children in the classroom? Is the teacher becoming more diverse in her own awareness and thinking, or more uniform?

Pam Cunningham, a one-room multigrade schoolhouse teacher at Sand Springs Elementary in Montana, shared some of the techniques she uses to evaluate her class. Her students range in age and ability and span three grade levels. Ultimately she believes that children need to express themselves orally, as well as have opportunities to learn from others within the classroom.

#### **Talking Journal**

To begin the day the children assemble with us on the rug. Children and adults take turns telling the group something of personal importance. Sometimes children share special articles brought from home. Active listening is an important part of Talking Journal time. Students are encouraged to comment and ask questions.

#### **Evaluation of Talking Journal**

We take note of the frequency and nature of the children's talk as well as their comments and questions. Some behaviors we watch for are: clear, audible voice; eagerness to share; ability to speak without a prop; interest in others' presentations; quality of questions and comments; and ability to actively listen.

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A message to the children is written on large chart paper and presented to the combined classes. Five or six words are left partially blank with only the beginning sound or blend given. We read the message aloud, deciding together which words will make sense in the blanks. The message often suggests the focus of the day's activities. As we discuss the content of the message, we note word meanings and usage, conventions of grammar, and other stylistic features of the writing. Next, students volunteer to spell the missing words. As we spell we discuss the sound/symbol correspondence of standard spelling. We compare "sound spellings" to the conventional spellings of words. As we review the message, we invite children to point out interesting things they have noticed. The students' observations lead to discussions on a wide variety of literacy concepts: word patterns, rhymes, homophones, vowel combinations, blends, mechanical features of punctuation and capitalization, and so forth. A copy of the message is sent home each day for homework and to provide information about daily school activities to parents.

### **Morning Message**

As one of the teachers is leading the Morning Message discussion, the other is noting on a checklist which children are actively listening and contributing to the chart discussion. We document on sticky notes when individual children suggest words for the message, provide sound spellings, supply conventional spellings, or notice significant things on the message. The children take turns being the student observer. Each day the student observer is also writing notable occurrences on sticky notes. At the end of the message discussion, both the teacher and student observers comment on the discoveries or behaviors of several of the children. Each day the sticky notes are filed in the class record book. We encourage parents to interact with their children while children are doing their homework. Through the course of the year, parents, children, and teachers can evaluate reading and spelling development through the homework.

### **Evaluation of Morning Message**

The daily Choice Time is a valued part of our program. As the children enter our classrooms in the morning, they sign up for an activity to do later at Choice Time. There are a wide variety of choices; some of them are teacher ideas and others have been suggested by the children. Some examples of choices include: blocks, puzzles, games, reading, writing, drawing, painting, constructions, clay, math tubs, dramatic play in the Little Room, and so forth. The Choice Time period is structured so that children may work and play either independently or in groups. It offers children opportunities to make decisions, to work on relationships, and to learn on their own. Choice Time also gives children the freedom to acquire skills, to attain concepts, and to practice in academic areas of their choice. Once every two weeks each student is scheduled to meet with the teacher for a goal-setting conference during Choice Time.

### **Choice Time**

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<b>Evaluation of Choice Time</b>	We find that children learn best when they have input into their learning. Choice Time has proven to be the setting for abundant growth and widespread learning among our students. As we observe the children during Choice Time, we note both social and academic development. Over time, we note the quality and degree of self-direction, creativity, decisionmaking skills, problem-solving ability, cooperation, and responsibility for materials that each student is exhibiting. We also note individual gains in reading, writing, math, and other content areas.
<b>Investigations Workshop</b>	We offer Investigations Workshops three times a week. During this 45-minute period the students work on math and science through theme-related activities. The themes studied are based on a three-year cycle of the district's science curriculum for the kindergarten, first, and second grades. The workshops include large-group, small-group, and individual projects. Sometimes the teachers determine the groupings; other times the students choose the group or activity in which they wish to participate. Hands-on activities that demand that the students problem solve, experiment, and do research are a major component of the Investigations Workshops. Each child has an Investigations Log in which she or he records significant learnings.
<b>Evaluation of Investigations Workshop</b>	The teachers observe the problem-solving and research strategies used by each student during the Investigations Workshop. We recognize and record incidences of scientific curiosity. We also note student choices of collaborative groupings and how each group conducts its investigations. Student-selected research projects may be included in the students' portfolios. The student Investigations Log serves as a record of individual learning.
<b>Literature Groups</b>	Literature Groups are groups of five to seven students and one adult who meet together to enjoy and discuss a book of their choice. The teachers select examples of quality literature, as many titles as there are groups. On sign-up day the teachers give short book talks to introduce the students to the upcoming Literature Group selections. The teachers make up the Literature Groups according to the students' choices. We study a variety of genres throughout the year. The make-up of the groups changes, with each new series of books. The Literature Groups meet for two, 45-minute sessions each week. Groups meet for four weeks, for a total of eight sessions. During the sessions the groups work on listening and speaking goals, as well as a variety of literacy activities. Some possible Literature Group activities are: reading and comparing different versions of the story; listening to related books; partner reading; studying character, plot, setting, and style; vocabulary study; and retellings. Finally, the group works together to plan a culminating project to share with the other Literature Groups.

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Leaders evaluate reading and listening comprehension, as well as the use of reading and writing strategies, during Literature Group activities. During discussions, the leaders also observe the quality and frequency of students' participation. Collaboration and cooperation in the group are also noted. Group members also evaluate themselves on their participation.

## **Evaluation of Literature Groups**

The students are grouped developmentally for math class three days a week. Large-group lessons, small-group lessons, and individual work are all components of these classes. This developmental grouping allows the teachers to group children at similar stages for instruction in basic math concepts. The remaining two days a week are spent in Math Workshop. The students are offered a choice of problem-solving situations to work on. As much as possible these problems will be related to real-life situations. For example, the children might be asked to decide how much pumpkin seed we need of each variety for next year's planting. They will then compute the needed garden space and design how the pumpkin patch could be laid out. Problems developed by students are also used. The workshop time gives the students the opportunity to problem solve in multiage collaborative groups, as well as on an individual basis. The work in the math classes and the Math Workshop is based on the district's math curriculum.

## **Math**

Teachers observe problem-solving strategies as the children are working. We watch for successful collaborations. We note the degree of understanding of mathematical concepts. Through math goal-setting conferences, we help children to recognize their strengths and to set further learning goals. Students take the district's math assessment test for concepts they have studied; the results are recorded on each child's math card.

## **Evaluation of Math**

Communications Workshop occurs every afternoon. It is a large block of time in which we are all engaged in a variety of literacy activities. We focus on the fundamentals of literacy: reading, writing, listening, and speaking. Students and teachers make choices within these areas during Communications Workshop. Students work on the personal literacy goals that they developed for themselves during goal-setting conferences with the teachers. The structure of the workshop follows:

## **Communications Workshop**

We begin the workshop with a read-aloud of a picture book or a continuing chapter book. Students have input into the book selection. Quiet reading is next. Students and adults choose books, magazines, newspapers, and other materials to read independently. After the quiet reading time, the reading segment of Communications Workshop continues with a variety of activities. Some students enjoy partner reading. Friends pair up to share books they have been reading. Sharing includes showing pictures, inventing a story to go with the pictures, talking about the book, or reading the book aloud. Some students listen to tape recordings of books at the listening center at this time. Others continue to read independently or to conduct research on self-chosen topics. A teacher-directed mini-lesson follows the



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reading time. The mini-lessons focus on reading and writing skills and strategies and on procedural elements of the workshop. After a break for gym, music, art, library, or computer instruction, the Communications Workshop resumes with quiet writing in daybooks. All children and adults write at this time; we choose topics of personal importance to write about in our daybooks. After quiet writing, students engage in a variety of writing pursuits as they continue the writing segment of Communications Workshop. Some writing possibilities include: personal writing (letters, notes, poems, songs, stories, etc.), collaborative writing, individual research, editing, illustrating their published works, and book responses. Several days a week we will end Communications Workshop with a sharing time. At this time, students and adults may read their writing or tell about a book they have enjoyed during Workshop. Listeners offer their comments and questions.

**Evaluation of  
Communications  
Workshop**

Every two weeks, regularly scheduled conferences during Choice Time help the students set appropriate literacy goals. We encourage them to balance their goals so that they are working on both skills and strategies in reading and writing. During Communications Workshop we work individually with children to monitor their progress on the literacy goals they have chosen. From time to time during the workshop, we question the children: What are your reading goals? What writing goals are you working on? Show me how you worked on your goals in your daybook today. How did you help yourself to be a better reader today? During the reading segment of the workshop we discuss books with children and listen to them read, noting their use of reading strategies. We evaluate strengths and weaknesses in word attack and comprehension, and we help the students in applying reading strategies. We assist them in choosing appropriate books. We evaluate as we talk with students about their writing, noting their attention to their goals, their facility with sound spelling and conventional spelling, their vocabulary growth, and the development of stylistic features in their writing. Most of our time during Communications Workshop is spent in helping individual students in specific areas of their literacy development.

**End of the Day Circle**

The last 10 minutes of our school day are reserved for guided reflection on our work of that day. The question for the day is posted on the board all day for the children to reflect on. At End of the Day Circle, a child reads the question, and those who wish to respond are called on. Some possibilities for questions are: What do you value about your work today? What did you do today to help yourself become a better reader? A better writer? A better mathematician? What did you do today to help someone else? What will you tell your family about what you did in school today? The children's comments are written down by the teacher and later transcribed in the End of the Day Question Book. This book is kept on a low shelf where the children can get it to read over their own and others' responses.

The teachers note the frequency with which students choose to respond to the questions, as well as the type of question that elicits the response.

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The children's abilities to express their thoughts clearly and audibly are also noted. The End of the Day Question Book offers a permanent record of the children's reflections.

### **Evaluation of End of the Day Circle**

As we learn from our students, our ideas about evaluation change. We try to assess our students' strengths and to show each student what she or he can do and how to build on that knowledge. We believe that evaluation is not for comparison; evaluation is qualitative, not quantitative. The purpose of evaluation is to value the child. Our progress report is an attempt to inform parents of their child's growth in a nonthreatening, informal manner. However, we feel that the best way to share our knowledge of children is to talk with their parents. To this end, we hold formal conferences with parents two or three times a year. We also encourage parents to frequently visit the classroom or call us to discuss their children's educational growth. We hope to encourage parents to see their children's strengths and to work as partners with us to provide their children with the best learning environment possible.

# Summary

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**I**n the multigrade class, different abilities from different ages are expected. It is very important to know the curriculum expectation for each age group and how to determine if a student is working at “grade level.” Teachers must know the curriculum guides well for assessment. Curriculum outcomes should be of prime importance when deciding what to teach and, therefore, what and how we intend to assess.

# Implications

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**M**ultigrade groupings provide an opportunity to assess a child over years instead of months in their life. Teachers meet the child’s family again and again and watch the student grow. Teachers work hard on behavior problems and see long-term results instead of hearing how a student pulled the same “stunts” on next year’s teacher. These are the advantages of following a multilevel group and measuring growth.

What about teachers who have a split or multigrade classroom as a temporary measure? This still allows an opportunity to see students as individuals and to value their differences. Students have a chance to work with another ability group for lessons and to learn from older students. Older students can model and teach younger ones. As part of the evaluation process, the teacher gets to overhear and observe the student’s knowledge in action, the teacher knows that students have truly learned it because they see them use their knowledge and pass it on. Younger students or novices become “experts” and have a true sense of what will be expected of them in the future. Evaluation in the multigrade classroom reports how individuals are progressing over years and indicates where they fit on the learning continuum.

# The Standards Movement in Small, Rural Multigrade Schools

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The beginning of the standards movement can be traced back to the 1983 publication of *A Nation at Risk* by the National Commission on Excellence in Education (Marzano & Kendall, 1996). Harshly critical of the public school system, the report focused America's attention on education like no single event since the Soviet Union launched Sputnik in 1957. In turn, education became a greater priority among state and national leaders, who until then had paid limited attention to the topic (Toch, 1991).

Since the early days of the standards movement, substantial effort has gone into developing standards at the local, state, and national levels. Evidence of this work can be seen in the voluminous standards documents that have been generated. Although the standards movement has considerable support among policymakers and the public, small-school teachers raise important questions about the implementation of standards. Their concerns can be grouped under four broad headings: (1) resource and equity issues; (2) relationship to previous failed reforms; (3) objectionable content in the standards; and (4) volume of the materials (Marzano & Kendall, 1996).

A common complaint among educators is that developing and implementing standards places a substantial drain on school resources. In rural areas, small-school faculties are already overburdened, and developing standards seems like an insurmountable task. Nor do small schools typically have the resources to hire outside consultants to guide their standards-writing process. Thus, resources given to standards writing and implementation must be taken from other areas, which may affect some types of students more than others. Such reallocation of resources raises serious equity questions.

Another criticism is that the standards movement is simply another way of packaging previously failed reform efforts. Some see similarities between the standards movement and the efficiency movement of the 1900s (Eisner, 1995), as well as the behavioral objectives movement of the 1960s. This perception leads to resistance among educators who see the standards movement as just another so-called innovation that will eventually go away. A third concern lies in what some consider to be objectionable content in the standards. For example, some teachers have argued that history standards portray a biased, unflattering view of U.S. history and neglect traditional American figures.

The fourth concern regards the volume of material to be covered by the standards. Reformers initially envisioned a relatively small number of standards that teachers could use to guide their instruction. Unfortunately, the professional organizations that developed the standards undertook the task with great zeal. The result is that there is no possible way that teachers, and in particular multigrade teachers, could teach the vast number of standards that professional organizations have outlined and still meet the varied needs of students in their classrooms.

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Despite similar concerns, multigrade teachers at the ESEA workshop felt that the multigrade classroom context was conducive to standards implementation and improved student achievement. Consistency over time in relationships among teachers, children, and parents was viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. Second, the concept of the classroom as a "family" leads to the expansion of the roles of nurturing and commitment to excellence on the part of the students and teachers. Cross-age interactions through tutoring and the repeated exposure to educational content also result in improved understanding and mastery. Social competence develops for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates.

## Summary

**M**ultigrade teachers have stated that high standards are good, and have been coveted by most educators. However, the quest for them in the present atmosphere is generating powerful policies and practices that often seem to be too simple, too centralized, and generally unquestioned. To succeed, multigrade teachers state that the movement for higher standards must engage and be informed by local schools and communities; it must recognize the competence and concern of the majority of teachers; and it must do justice, not harm, to children of poverty.

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# Resources

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Cohen, E.G. (1986). *Designing groupwork: Strategies for the heterogeneous classroom*. New York, NY: Teachers College Press.

This book provides detailed strategies for starting groupwork in your classroom and describes the research supporting cooperative workgroups. The book is written in a direct, clear style that makes it easy to follow and useful to the classroom teacher.

Available from: Teachers College Press  
Columbia University  
New York, NY 10027

Cohen, E.G. (1980). *Teacher application pamphlet: Designing change for the classroom. Final report. Status equalization project: Changing expectations in the integrated classroom*. Stanford, CA: Stanford University, Center for Educational Research. (ERIC Document Reproduction Service No. ED 211 501)

This study provides a theoretical rationale for using small groups, directions on how to train children in small-group behavior and specific activities to be used during training, and information on adapting existing curriculum for small-group work.

Available from: ERIC  
3900 Wheeler Avenue  
Alexandria, VA 22304-6409

Cotton, K. (1995). *Effective schooling practices: A research synthesis*. Portland, OR: Northwest Regional Educational Laboratory.

This research synthesis describes characteristics and practices identified by research as associated with improvements in student performance. Findings are cited within three sections, each focused on one level of organization: the classroom, the school, and the district. Groups of practices derived from the research have been organized into practice clusters (such as “Teachers Use a Preplanned Curriculum to Guide Instruction”) and then into cluster groupings (such as “Instruction” and “Assessment”).

Available from: Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, OR 97204

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Johnson, D., Johnson, R.T., Holubec, E.J., & Roy, P. (1984). *Circles of learning: Cooperation in the classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.

The authors present the underlying concepts regarding cooperative learning. Steps for implementing cooperation in your classroom and the research supporting it are also presented.

Available from: Interaction Book Company  
125 N. West Street  
Edina, MN 09874

Kagan, S. (1990). *Cooperative learning: Resources for teachers*. San Juan Capistrano, CA: Resources for Teachers.

This book provides a detailed guide for implementing the structural approach to cooperative learning. It includes a guide to resources in cooperative learning and an overview of cooperative learning research. There is a wealth of concrete strategies for teachers to use.

Available from: Resources for Teachers  
27134 Paseo Espada #202  
San Juan Capistrano, CA 92675

Novick, R. (1996). *Developmentally appropriate and culturally responsive education: Theory in practice*. Portland, OR: Northwest Regional Educational Laboratory.

Available from: Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, OR 97204

Slavin, R.E. (1986). *Using student team learning* (3rd ed.). Baltimore, MD: Johns Hopkins University, Center for Research on Elementary and Middle Schools.

This teacher's manual describes a set of practical instructional techniques that involve students in cooperative activities built around the learning of school subjects. These are techniques developed and researched at Johns Hopkins University, plus related methods developed elsewhere.

Available from: The Johns Hopkins Team Learning Project  
Center for Research on Elementary and Middle Schools  
Johns Hopkins University  
3505 North Charles Street  
Baltimore, MD 21218

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Yates, R. (updated February 2000). Resources for multiage classrooms.  
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[www.chimacum.wednet.edu/multiage/](http://www.chimacum.wednet.edu/multiage/)

This Web site is dedicated to helping teachers and administrators interested in multiage/multigrade education find and gather relevant resources such as curriculum evaluation samples. Here you will also find materials that reflect some of the ways multiage programs can be set up. There are many, many more possibilities.

K 1 2 3 4 5 6 7 8

# **The Multigrade Classroom**

## **A Resource for Small, Rural Schools**



Book 5: Instructional Delivery and Grouping



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 5: Instructional Delivery and Grouping**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.

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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.

# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.

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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.

# Participants in the Multigrade Conference

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**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaumakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*W.W. Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age interactions through tutoring and shared discovery. Social competence develops

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for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In

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this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.





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# Instructional Delivery and Grouping

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Every method a teacher uses has advantages and disadvantages, and requires some preliminary preparation. So, what else is new? Three broad categories of instructional methods are teacher talk, student talk, and student-teacher interactive talk. Often, a particular method will naturally flow into another within the same lesson. Which instructional method is “right” for a particular lesson depends on many things, and among them are the age and developmental levels of the students; what the students already know; what they need to know to succeed with the lesson; the subject-matter content; the objective of the lesson; the available people, time, space, and material resources; and the physical setting. Another, more difficult problem, is to select an instructional method that best fits one’s particular teaching style and the lesson situation. There is no one right method for teaching a particular lesson, but there are some criteria that pertain to each that can help a teacher make the best decision possible.

In this book, the most commonly used methods will be briefly described, along with research-based evidence indicating their potential impact on students. In addition, methods found to be most beneficial for multigrade instruction will be discussed in greater detail, indicating how they might be used and where further information may be obtained.

Because cooperation and peer support play such a key role in multigrade instruction, a major emphasis will be placed on groupwork: how to form groups, how to structure learning experiences, and what skills are needed for successful cooperation. It is important to keep in mind that instructional delivery and classroom environments are extremely complex. Information presented here provides only a sampling of possibilities. References and resources are included at the end of the book for those seeking more detailed information.

# Methods Teachers Commonly Use

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From our early experiences as students, we generally remember a classroom characterized by the teacher in front of the room or in front of our reading group, “teaching.” After the lesson, we often completed worksheets at our individual desks while the teacher worked at her desk. A test was often given sometime later to determine what we learned. If asked what our favorite subject was, we jokingly would say, “recess.”

Not much has changed for a great majority of students. Based on current research, this pattern of instruction is alive and well in a majority of classrooms in the United States, despite evidence that there may be more effective methods of learning and ones that better meet our schools’ goals for democratic citizenship. One of the most extensive studies of schooling practices ever undertaken was presented by John Goodlad (1984) in *A Place Called School*. In his discussion of the data taken from student and teacher interviews and observations of more than 1,000 classrooms, Goodlad’s research presents a rather bland picture of student learning experiences:

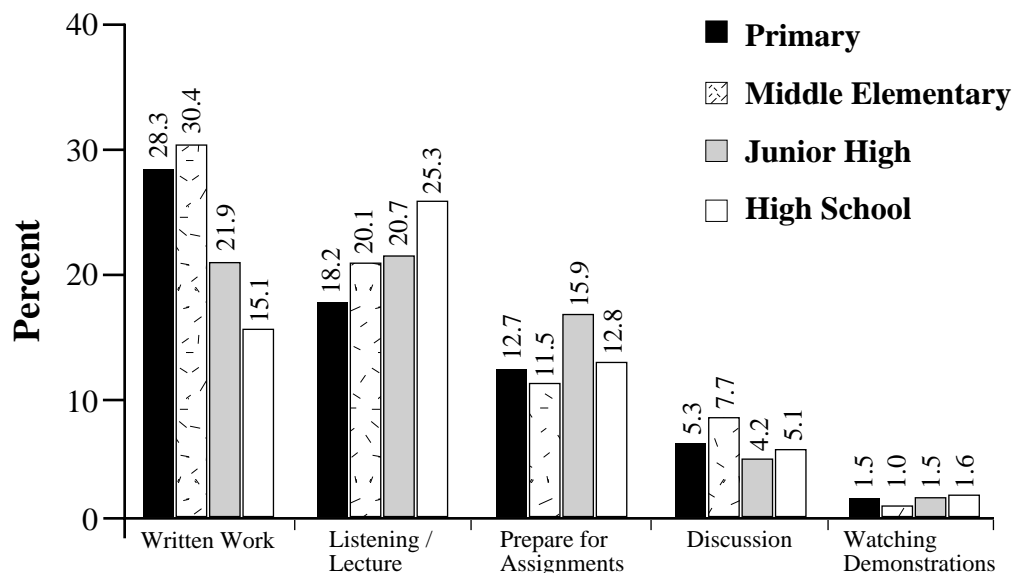
*Four elements of classroom life in the schools of our sample come through loud and clear from our data. First, the vehicle for teaching learning is the total group. Second, the teacher is the strategic, pivotal figure in this group. Third, the norms governing the group derive primarily from what is required to maintain the teacher’s strategic role. Fourth, the emotional tone is neither harsh and punitive nor warm and joyful; it might be described most accurately as flat.*

*No matter how we approach the classroom in an effort to describe and understand what goes on, the teacher comes through as coach, quarterback, referee, and even rule-maker. But there the analogy must stop because there is no team. There is little or nothing about classroom life as it is conducted, so far as I am able to determine, that suggests the existence of or need for norms of group cohesion and cooperation for achievement of a shared purpose (p. 108).*

Not surprisingly, the most dominant form of instruction was a lecture-recitation format, where the teacher presented the information to be learned, asked questions to check understanding, and then gave seatwork. The frequency of these activities increased progressively from the primary grades through high school. Goodlad found little evidence of instructional methods that used active modes of instruction (discussion, demonstrations, small-group projects, etc.).

Figure 1 presents a summary of five instructional practice areas in primary through high school classes drawn from Goodlad’s research.

**FIGURE 1. Snapshot Observations of Instructional Practices  
From *A Place Called School***



More than 60 percent of student time is involved in passive activities where students either listen to the teacher or do seatwork assignments. The remaining percentage of instruction (not shown on the graph) reflects more active forms of learning, such as practice in verbal performance (average for all levels = 4.6 percent), nontextbook reading (average for all levels = 4 percent), and simulation/role play (average for all levels = 2 percent). No data were obtained indicating that students worked cooperatively on group projects, tutored, or were involved in inquiry forms of instruction.

Goodlad's research demonstrates that the most common form of instruction employs a lecture-recitation format, where students tend to be passive participants for a large part of the learning process. Many reasons account for this reliance on lecture-recitation: It is the way most of us were taught as children; It is the predominant instructional method in schools; It is the primary form of instruction in teacher preparation classes; And it provides for greater teacher control.

If we want to develop cooperative, self-directed learners, then other instructional methods must be used as well. In addition, recent research on effective teaching sheds new light on the use of recitation. Teachers whose students show significant growth in achievement have strengthened the recitation method so that it is a powerful tool for teaching basic skills. This method has been called by numerous names: direct instruction, explicit instruction, and the practice model of instruction. Even with these improvements, teachers must use a variety of methods if student attention and motivation are to be maintained (Good & Brophy, 1987). It also must be recognized that some types of learning concept development—how to work in small groups, developing self-direction, or building skills as a writer—require different instructional methods.

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## Recitation

**R**ecitation gained its name from the early 19th-century practice of a single student reciting a lesson to the teacher. With the rise of graded classroom instruction, the term has come to mean a “whole-class format characterized by question-answer drills over content” (Doyle, 1986, p. 403).

Lecture-recitation has three distinct parts:

1. Explanatory presentations of organized information (often by teacher presentation or independent study)
2. Monitoring student “learning” through questions requiring a single, correct-answer response
3. Publicly evaluating student responses for correctness

There are many variations of these three steps. They may be used in small or large groups, or they may be used with individuals. Generally, research indicates that recitation is most commonly used with large, whole-class groups. A typical recitation involves a teacher questioning students in a fast-paced manner. Students publicly answer, and their responses are evaluated for correctness. Recitation tends to work best with factual or convergent type information and with students of the same ability level. A typical scenario is described below:

- Teacher:** We have just presented information on using adjectives to sharpen your writing skills. Let’s review to see how much you learned. What job does an adjective play in a sentence?
- Student:** It serves to describe a noun.
- Teacher:** Excellent. Who can give me an example?
- Student:** Old.
- Teacher:** That’s correct.
- Student:** Run!
- Teacher:** No, that’s an action word.

Notice that the teacher has just completed a presentation on adjectives and begun to question students to check their understanding. When a student gave a wrong answer, the teacher said it was incorrect.

Recitation can be used to gain feedback on student knowledge. However, when used with groups, public evaluation of student responses and the equitable distribution of questions can be problematic for many students, especially low achievers. During recitation, students quickly learn

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who the “smart” students are by who gets asked questions and who has the correct answers. The long-term effect on many students is to dampen their desire to answer questions. Students learn it is better to be quiet and let the “smart” students do the talking. This method of teaching can stifle a teacher’s creativity. It requires well-organized content preparation and good oral communication skills, which, depending on the age level of students, may vary. Steps must be followed in a prescribed order, hindering the possibilities of exploration. This method encourages memorization of facts and does not encourage or allow for the development of higher-order thinking skills.

If a teacher uses recitation, what can be done to reduce or eliminate the negative effects? In his book on questioning, Dillon (1988) provides some strategies and guidelines for increasing student involvement and reducing the negative impact of public evaluation. Dillon suggests that students also prepare convergent questions to be used during recitation. Instead of the teacher using the students’ questions, students pair up and ask each other the questions. Table 1 provides an overview of the key elements in planning and carrying out recitation.



**TABLE 1. Planning Guide for Recitation**

<b><u>Teacher Asking Questions</u></b>	<b><u>Student Asking Questions</u></b>
<p><b><i>Prepare the questions to ask:</i></b></p> <ol style="list-style-type: none"> <li>1. Write them down</li> <li>2. Arrange them in a purposeful order</li> <li>3. Try them out on friends, then revise</li> </ol> <p><b><i>Ask questions slowly:</i></b></p> <ol style="list-style-type: none"> <li>1. Stop and think before asking</li> <li>2. Ask and wait patiently for a response</li> </ol> <p><b><i>Listen intently to the answers:</i></b></p> <ol style="list-style-type: none"> <li>1. Show interest in the student response</li> <li>2. Listen to all of the response</li> <li>3. Listen to right and wrong answers, from slow and fast students</li> </ol>	<p><b><i>Preparation:</i></b></p> <p>Have each student prepare five written questions and answers, while you prepare 10 questions</p> <p><b><i>Exchange:</i></b></p> <p>Help students orally exchange their questions and answers, while you listen and comment</p> <ol style="list-style-type: none"> <li>1. Student A asks a question</li> <li>2. Student B gives an answer</li> <li>3. Student A evaluates the answer</li> <li>4. Student B asks the next question</li> </ol> <p><b><i>Quiz:</i></b></p> <p>Contribute a few of your questions to be answered orally or in writing</p> <p><b><i>Evaluation:</i></b></p> <p>Evaluate the question-answers, correcting the questions and teaching students to use questions for learning</p>

(adapted from *Dillon, 1988, p. 98*)

Other strategies have been effectively used to counteract these negative effects (Good & Brophy, 1987; Kagan, 1990):

- Extend wait time after a question to three to five seconds
- Keep a tally of who has been called on to ensure that all students get an equal opportunity to respond
- Use cooperative learning structures that allow students to confer with one another before answering
- Have students write answers down and hold them up when responding

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Dillon (1988) suggests that careful planning, patience, and a show of interest (listening) are central to effectiveness. He also suggests that recitation is based on an explicit set of behaviors that should be followed consistently. In other words, don't use tricky questions when students expect right-or-wrong-type questions.

In terms of evaluation, be clear if the response is correct or incorrect, and then praise and elaborate. Corrective feedback has been shown to improve student achievement (Barell, 1995; Good & Brophy, 1987).

For the multigrade teacher, recitation must be used judiciously. It is not a method that lends itself to whole-class instruction, where multiple performance levels have been combined. Recitation is most effective when used for basic skills instruction, where all students are learning the same skill and are at the same performance level.

## Discussion

**B**oth discussion and recitation use questions, but discussion is quite different in its purpose and the types of questions used. As you may remember, recitation uses convergent questions (only one right answer). Discussion, on the other hand, uses a few well-thought-out, divergent questions aimed at perplexing students, in order to stimulate thought and conversation. Whereas recitation asks many questions with single answers, discussion asks fewer questions that generally have more than one right answer.

The role of the teacher is quite different in discussion as well. The teacher does not talk at every turn of the questioning, but yields the floor to students who speak at considerable length, respond to observations made by their peers, and bring in outside information to illustrate their points of view. Consider the following scenario:

- Teacher:** If you found \$10 on the way to school, what do you think you would do with it?
- Student 1:** I would keep it. If it was just blowing along the ground, there would be no way to know whose money it was.
- Student 2:** I am not sure. I would like to keep it, but then maybe the person who lost it really needed it. I am not sure how to find the person who lost it.
- Teacher:** That is an interesting point. How would you find the person who lost the money?

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As the example illustrates, discussion begins with a perplexing question that engages student interest and thought. As students express their viewpoints, a diverse set of responses begins to emerge that often raises additional questions. The teacher's role is to keep discussion moving by raising probing, but related, questions.

Table 2 provides an overview of the key elements in planning for a discussion. Since discussion involves divergent questions, where no single answer is correct, students from many different levels of achievement can participate. However, students need to be trained in how to listen and support their peers during discussion.

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**TABLE 2. Planning Guide for Discussion**

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**Prepare the question for discussion:**

- Develop a question based on your intended purpose and write it down.
- Decide how you will present it to students: orally, on the blackboard, or as a handout.

**Be sure your question perplexes students:**

Review the question with students until they understand it the way you do. Use non-questioning techniques to facilitate discussion. There are four general approaches that can be used after a student has just finished speaking:

- *Statements* If you have questions you would like to ask in order to facilitate discussion, rethink them as statements. For example, instead of saying, "Do you believe all people feel that way?" you might say, "I know several people who have different feelings about that. You can also use a restatement of what you think a student may be saying. The point here is to avoid falling into a central teacher questioning role and to keep the discussion going among the students."
  - *Student Questions* Provide for a student or the class a question regarding what a speaker has contributed. For example, a student has just said that people who make lots of money are insensitive to the poor. Other students could be encouraged to ask: "Can you tell us why you believe that?"
  - *Signal* Signal your reception of what the student is saying without taking or holding the floor yourself. You might use phrases such as, "That is interesting," "Oh, I had not thought of that before," or "Wow, Amazing, and so forth."
  - *Silences* Say nothing at all but maintain a deliberate, appreciative silence for three seconds or so, until the original speaker resumes or another student enters. If the silence is too long, act quickly.
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In summary, discussion, unlike recitation, begins with a teacher question aimed at perplexing students and thereby engaging them in student-to-student dialogue. The teacher's role is not to control and direct student responses toward single "correct" answers, but to facilitate student exploration of the topic. Discussion may be used with a wide range of student levels and is an excellent method for stimulating ideas for writing. Because it works well with multiple achievement levels, it is ideal for total class instruction in the multigrade classroom.

# Practice Model of Instruction

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**T**he Basic Practice Model of Instruction (Murphy, Weil, & McGreal, 1986) exemplifies a direct-instruction method that embodies the research on effective teaching in a meaningful framework for teachers. The research supporting this model has been collected from real-life classes where students have shown significantly high academic achievement. In developing the model, two areas of learning were focused on: the learning environment and the learning activities. The crucial variables relating to each of these areas will be presented on the following pages along with the research supporting their effectiveness (as cited in Murphy, et al.). This model is most beneficial to the multigrade teacher for use in basic skills instruction. However, elements of the model have wide implications for effective teaching with most subjects.

## The Learning Environment

**R**esearch has identified six essential variables affecting the learning environment that are under teacher control and related to student achievement in basic academic subjects. Each variable will be presented along with its identifying characteristics and the associated teaching behaviors.

### **Teacher authority**

Strong teacher direction and control are associated with student achievement in basic skill subjects. This occurs because the teacher maintains greater student involvement and more on-task student behavior through the following activities:

- Controlling and maintaining a dominant role in discussion
- Assigning children to seats and learning groups and arranging the learning environment so children do not have to get up to secure materials
- Organizing instruction around teacher questions and using questions that require specific answers in a recitation format

### **Task orientation**

The learning environment is characterized by a primary emphasis on the assignment and completion of academic tasks. Students are more engaged and learn more when teachers maintain a strong academic orientation rather than a strong emotional/self-esteem focus. Students who have success on academic tasks generally have better self-concepts than those who do poorly.

### **Positive expectation**

The teacher shows a positive concern for each student by demanding academic excellence and mature behavior conducive to academic progress. Teachers expect more work and quality work because they believe that all students can learn.

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Teachers who expect students to work together and cooperate on academic tasks produce higher student performance than teachers who do not emphasize cooperation. Effective teachers:

- Expect students to cooperate in completing academic tasks
- Hold students accountable for their work
- Use well-thought-out reward systems for reinforcing cooperation

**Student cooperation and accountability**

Teachers should emphasize academics through positive reinforcement and avoid such negative behaviors and attitudes as criticism of student behavior, yelling or screaming at students, using sarcasm with students, scolding students for inappropriate behavior, and ridiculing students to facilitate learning.

**Nonnegative affect**

Teachers who establish a clear learning structure, including norms for student behavior and predictable patterns of activity, produce greater student learning than those teachers who do not establish a well-defined structure. The establishment of structure involves:

- Developing clear class rules and procedures that are taught and monitored
- Establishing clear class routines and ensuring that all students understand them

**Established structure**

# The Learning Activities

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**T**he sequencing of activities in a lesson and the types of activities the teacher chooses to emphasize have a direct relationship to student academic achievement in basic skills. The following three topic areas have been associated with effective planning and instruction.

## Establishing a Framework for the Lesson

**B**efore the lesson begins, the teacher establishes a framework for instruction that helps students understand how information will be presented. Effective teaching research has identified six key teacher behaviors:

- Organizing learning materials in advance
- Providing clear, explicit direction about the work to be done
- Telling students about the materials they will use and the activities in which they will be involved
- Conducting pretests, revealing, discussing the objective of the lesson
- Providing an overview of the lesson
- Relating new materials to what students have already learned

## Teacher-Student Interactions

**T**his part of the lesson is often referred to as the direct instruction component, where the teacher presents materials to the students and solicits their reactions. There are two distinct phases in this part of the lesson.

In Phase 1, the teacher:

- Presents the skill or concept in the form of a model that demonstrates how the parts of a skill are connected and works through several examples.

In Phase 2, the teacher:

- Conducts recitation to check for student understanding. During this phase of instruction, research has demonstrated the effectiveness of specific teacher questioning behaviors.  
—Teachers dominate the questioning process by asking questions rather than answering them

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- Teachers remain active by constantly rephrasing or asking new questions
  - Questions are phrased in terms of the academic objective of the lesson
  - Questions are phrased in order to ensure a high level of student success
  - Teachers use factual questions with single answers when teaching basic skills

Research has also demonstrated the effectiveness of certain types of teacher response:

- Teacher responds to incorrect or unclear answers by probing in order to have students clarify or improve their answers
- Teacher provides additional information or reteaching for incorrect or unclear responses
- Teacher avoids criticism
- Teacher gives specific and personalized praise
- Teacher gives mostly academic-related praise
- Praise is dependent on the quality and nature of the student response

Finally, three teaching behaviors have demonstrated their effectiveness in structuring student attention toward key lesson elements:

- Teacher alerts students to the key parts or skills of the lesson
- Teacher sums up subparts of the lesson and the entire lesson at the end of instruction
- Teacher informs students of transitions during the lesson

Both the teacher presentation and recitation phases of the lesson have been strongly associated with student on-task behavior, higher cognitive response abilities, and more favorable attitudes toward the subject.



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## Monitoring

**M**onitoring refers to that part of instruction that occurs after the direct instruction. During this phase, the teacher supervises student practice to determine skill comprehension and provide additional assistance. Monitoring has been shown to improve student on-task behavior and increase achievement. Monitoring helps to hold students accountable for learning. During monitoring, the teacher should:

- Prepare students for seatwork by making sure they can perform the work
- Maintain a dominant position, deciding who receives feedback and help
- Provide feedback on specific subskills of the lesson in small, manageable portions that last a few seconds rather than long periods

When this effective teaching research is put together into the Practice Model of Instruction, it provides a clear and sequential set of steps for teaching basic academic skills to students. Table 3 provides an overview of the four phases of the model and their related steps.

The Practice Model of Instruction reflects the accumulation of effective teaching research. It is important to keep in mind, however, that this body of research reflects a primary focus on the teaching of basic skills in reading and math. From another perspective, this research reflects what the most effective teachers have done using a teacher-directed recitation method of instruction. Clearly, this model is not applicable to all types of learning and should be used with this caution in mind. (For a detailed, online guide for using different models of instruction, see [www.proteacher.com/html](http://www.proteacher.com/html)).

**TABLE 3. The Basic Practice Model of Instruction**

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<b>Phase</b>	<b>Steps</b>
1. Orientation	<ul style="list-style-type: none"><li>• Teacher establishes goals, procedures, and content of lesson</li></ul>
2. Development	<ul style="list-style-type: none"><li>• Teacher explains concept or skill</li><li>• Teacher provides model/demonstration</li><li>• Teacher checks for understanding</li></ul>
3. Structured Practice	<ul style="list-style-type: none"><li>• Teacher leads group through practice examples</li><li>• Students respond with answers</li><li>• Teacher provides corrective feedback</li></ul>
4. Guided Practice	<ul style="list-style-type: none"><li>• Students practice new concept or skill as seatwork</li><li>• Teacher monitors student seatwork</li><li>• Students practice new skill concept as homework</li></ul>

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*(Murphy, Weil, & McGreal, 1986, p. 91)*

The research-based components are especially strong features of the Practice Model. In addition to their use with this model, many of them can be applied across a wide range of instructional methods in the multigrade classroom.

For example, in whatever method you use, it is beneficial to be explicit with students regarding academic and behavior expectations. It also makes sound educational sense to monitor learning in order to adjust instruction and to indicate to students that learning is important.

# Independent Study and Individualized Instruction

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Independent study and individualized instruction are terms that have often been used to mean the same thing: students working independently from one another and from the teacher in order to achieve individual learning goals. However, there are differences between independent study and individualized instruction that can be illustrated on a continuum (Figure 2) in terms of student control and responsibility over the learning process (Klein, 1982).

**FIGURE 2. Degree of Student Responsibility and Decisionmaking About Learning**

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Little		Much	
/		/	
Class-centered	Individualized instruction	Audio-tutorial formats	Independent study
Teacher-controlled, large-group lectures			Student-controlled, somewhat independent of class organization
Structures of content developed externally from the student			Structures of content developed internally by the student

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(Klein, 1982, p. 836)

Generally, independent study is associated with high school and college-level education where students work with an advisor in setting up a program of study that is independent of classroom or course organization.

More recently, independent study has been used at the elementary level with gifted students who are highly motivated and self-directed learners. In both situations, there is a trend toward students setting their own learning goals, choosing an approach to achieving their goal, and conducting periodic self-monitoring.

It is also important to distinguish this concept of independent study from the common elementary practice called independent seatwork, where students work independently on learning activities that are related to a teacher-directed lesson. Students may have some choice in materials or activities, but the teacher maintains primary control of learning.

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Individualized instruction, like independent learning, has come to mean many different things. However, several key features distinguish it from other instructional methods. Wang and Lindval (cited in Good & Brophy, 1987, pp. 360–361) identify seven features that distinguish individualized instruction from other methods of learning:

1. Instruction is based on the assessed capabilities of each student.
2. Materials and procedures are used that permit each student to progress at a pace suited to his or her abilities and interests.
3. Periodic evaluations are used to inform the student regarding mastery of learning goals.
4. Students assume responsibility for diagnosing present needs and abilities, planning learning activities, and evaluating their progress toward mastery.
5. Alternative activities and materials are available for aiding student acquisitions of essential academic skills and content.
6. Provisions for student choice in selecting educational goals, outcomes, and activities exist.
7. Students assist one another in pursuing individual goals and demonstrate cooperation in achieving group goals.

Although few individualized programs contain all seven elements, most contain provisions for diagnosing student needs, organizing learning materials and experiences, evaluating progress, and creating alternative learning materials for students who need reteaching.

In summary, the greatest variation between individualized instruction and independent study centers on the degree of student control and responsibility, with independent study requiring the most. Clearly, teachers must begin by teaching students to handle responsibility and self-direction before assigning them to one of these strategies, and then doing so only when they are ready.

The research on these two methods of instruction is uneven and inconsistent. In part, this is due to the wide range of individualized programs implemented and variations in how educators define their methods. However, it is safe to say there have been significant gains in academic achievement when the programs have been designed and implemented using effective learning principles (Good & Brophy, 1987).

A central problem for the multigrade teacher is working with individuals or small groups while ensuring that the remainder of the students are meaningfully engaged in learning. Individualized instruction and independent study provide useful methods for solving this problem. For example,

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while the teacher instructs a group of primary-level students in reading skills, students at the upper levels could be engaged in individual or group learning activities that have been developed and written down in advance.

The types of individual learning activities depend on the needs of students, available resources, and the maturity of the students. Some students might require tightly sequenced and structured learning materials, while others may be self-directed enough to establish their own learning goals, choose the learning activities, and keep track of their own progress. Learning centers, computerized learning programs, and learning kits have been used extensively to aid in individualization. However, teachers have usually used them as an extension of existing lessons rather than as a unique program of studies. Problems associated with individualized instruction tend to support this teacher practice.

Good and Brophy (1987) identify several issues or concerns surrounding the use of individualized instruction that should be considered when using this method in the multigrade classroom:

- Research on teaching has found that active, direct instruction produces higher rates of academic achievement for basic skills than other instructional methods. Individualization eliminates this active teaching element from learning.
- Higher cognitive processes such as problem solving, creativity, and thinking strategies are not easily taught without the direct involvement of the teacher.
- Students are too often left on their own to learn, leaving the materials to provide the instruction. This often leads to mastery of skills without the ability to apply them.
- The principles of individualization require that pacing, materials, and strategies be developed and tailored for each student. This is not feasible for most teachers in terms of resources of time and materials.

In summary, Good and Brophy (1987) do not recommend individualizing instruction if it means that students will spend most of their time working alone trying to learn from materials. Instead, they suggest using individualization when the teacher “attempts to accommodate individuals’ needs within the group context and to achieve an appropriate balance of instructional activities (whole-class instruction, small group instruction and cooperative learning activities, individual work)” (p. 374).

This means that the multigrade teacher needs to maintain a central role in student learning, but one that encourages and enhances the development of self-direction and responsibility without abdicating responsibility for student learning.

# Using Computers as an Instructional Tool

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**M**ost six-year-olds can't wait to go to school on the first day in September. However, for an alarmingly large number of these children, boredom, anxiety, and fear of learning quickly set in (Shank & Cleary, 1995). A teacher lecturing to a classroom of 30 students goes against everything researchers have discovered about the way children learn. Our schools suffer from the assumptions that learning can be disassociated from doing, that every child must conform to a standard curriculum, and that accumulating facts is as important as learning processes. Compared to the rapid technological change our society has undergone in the last century, the rate of change in our educational institutions has been at a near standstill.

Nicholas Negroponte, Mitchel Resnick, and Justine Cassell, professors from the Massachusetts Institute of Technology, argue in *Creating a Learning Revolution* (n.d.) that digital technologies can enable students to become more active and independent learners. The Internet will allow new “knowledge-building communities” in which children and adults from around the globe can collaborate and learn from each other. One of the most potentially powerful tools for facilitating instruction in the multigrade classroom is the use of microcomputers. Computers will allow students to take charge of their own learning through direct exploration, expression, and experience. This shifts the student's role from “being taught” to “learning” and the teacher's role from “expert” to “collaborator” or “guide.” These ideas are an integral part of constructivism, an ideal strategy for the varied ability and age levels of a multigrade classroom.

Constructivism is both a theory of learning and a strategy for education. It builds on the “constructivist” theories of child psychologist Jean Piaget and asserts that knowledge is not simply transmitted from teacher to student, but rather is actively constructed in the mind of the learner. This theory suggests a strong connection between doing and learning. It asserts that activities such as making, building, and programming provide a rich context for learning (Kafai & Resnick, 1996).

In order to allow students to take more responsibility for their learning, they must be allowed to put concepts into a personally meaningful context. Students retain more information and have more fun learning when material is presented in this way. Computers make these meaningful contexts possible by providing students with highly individualized education.

Another important application of computer technology is simulation. Computer simulation allows students, especially in small, rural schools, to explore phenomena that would otherwise be too expensive or too impractical. Simulations are effective because they provide a guiding context for students to integrate what they learn. They learn details in the context of a larger task and are not faced with decontextualized facts that have no relevance to their lives or goals (Shank & Cleary, 1995).

# Common Uses of the Computer in Education

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## Using the Internet in the Primary Classroom: Research Projects

**T**his is the starting place for most schools. The children have a theme or topic to work on, and a series of World Wide Web sites are suggested for research, or a Web search is suggested to find extra information. As teachers who make effective use of computers in their classrooms know, this means a little extra work for the teacher. Do not send the children somewhere you haven't been yourself. Giving children carte blanche to perform Web searches is inviting trouble into your classroom and life.

The main skill involved is the gathering of information. Students who have been taught to ask questions can use them to accomplish this immediate assignment and to lay the groundwork for doing research, which begins with a question. The “go find out about it” research project can begin with students asking questions. Ask them, “What questions can you ask about how to do this assignment?” They may ask such things as:

- Where do I find out about it?
- Where do I start?
- Which references are very general to give the big ideas?
- Which references are too detailed for what I want to know?
- What resources can I use besides books?
- How will I know what is important about the topic?
- How will I know how to organize the ideas?

Notice that these kinds of questions lead students to develop a plan based on a clarification of their goals and what they know about available resources. The essence of this type of research assignment is finding enough information to give a general description. “A” papers hit all the high points on the topic, and are well-organized and well-written. Every student can be guided by the questions that produce a quality description if we give them the proper questioning tools.

A more meaningful, curiosity-driven version of the research project begins with student questions. Students should be able to guide research. The teacher can require types of questions that cannot be answered directly from a book. For example, if a student asks, “Which Civil War general was the best?” the gathering of information eventually leads to a student judgment based upon criteria. This evaluation task involves the student seeking information for the purpose of answering a question—he or she posed a very lifelike and lifelong activity. Instead of an assignment in a high school health class to “go find out about a topic in human sexuality,” students discuss dilemmas in human sexuality such as parenting, birth control, and parent/

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teen conflict. Their research paper assignment is to choose a dilemma to address in detail, presenting both sides of the issue and drawing a personal conclusion. Under the careful guidance of a teacher, and with support for answering questions they care about, students may find that research papers can become a source of great satisfaction.

## Publications

**H**aving a “net presence” is quite different from having “net access.” Since the earliest days of the Internet, one of its endearing features has been the concept of information sharing. While many corporations and others charge for their information and services, there is still a substantial “free Internet,” and this is where schools (and private users) find themselves. Sharing implies giving as well as receiving, and anyone who has been a net user for more than a short time knows how difficult it can be to stay out of a discussion in a newsgroup or mailing list. Instead of children and teachers just taking information from the Internet and using its resources, they could show what has been done with the resources used and directing others to worthwhile and useful sources of information.

Publishing a school Web page can be a daunting task, especially for someone with little prior experience in computer use or page-design software.

What do you put up on the page? What don't you put up on a school Web page?

First, a decision needs to be made as to why you even want a Web page. Is it to encourage new enrollments? Is it to show off to the world how great you are as a school? Is it so the designer can display his or her HTML skills? Is it so the students can publish their writing, which all the world wants to read? (Probably not.) Is it because the principal knows that a rival school has a Web page and you don't? Once you have decided why you want a Web page, you are better able to work out what should be included.

For starters, don't include too many big graphics. If you want to include a photograph (a good idea), use thumbnails or links rather than having them embedded in the page. Make the site navigable: allow visitors to find what they want and to easily get from page to page. If you want to include students' work, have a reason for it. Respect privacy and copyright laws. Make somebody responsible for the content, ensuring that it is appropriate for your school and keeping in mind your reasons for establishing the Web page.

The following list of recommendations stemmed from some post-graduate students' research into school Web pages in the United States:



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1. Share the work of school Web site development. If a school is determined to create a Web site, plans should be developed for the creation and maintenance process. Someone (or a team) should have ongoing responsibility for general oversight. If students contribute to the school pages, the individual (or team) should monitor, and accept responsibility for, the quality and appropriateness of student contributions.
  2. Encourage teachers to create their own pages. Since they are most familiar with the content of classroom curriculum and activities, they are more likely to include descriptions of those on their pages. If students contribute to teachers' pages, the teachers should monitor, and accept responsibility for, the quality and appropriateness of student contributions.
  3. Limit the number of links to external resources in the following ways:
    - Choose only a few of the best links to include, so that teachers don't get discouraged searching through an extensive list.
    - Describe the linked site.
    - Review links regularly and discard or update links, which can change.
    - Teachers should include links that can be of use to students, organized according to a class project, topic, or activity. Describe what students are expected to do with the information or activity contained at the linked resource.
  4. Display student work purposefully. Describe the unit that resulted in the product. Protect students' privacy by including only their first names, without photos, except for class photos without names. Have students annotate their work with a description of what they did, what they learned, and how using the Internet (or other technologies) was helpful.
  5. Be courteous in the use of graphics. Bear in mind that most schools and homes are still modem-based. Keep graphic file size small, and restrict the use of animated graphics. Include graphics only to enhance the meaning of the site. Experiment with new technologies on work pages that are not publicly displayed. Use Java only to facilitate dynamic data collection.

For more information check out: [www.teacherzone.com/specialreports/onmenu/onmenu06.html](http://www.teacherzone.com/specialreports/onmenu/onmenu06.html).

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## Collaborative Projects

**T**here are two types of collaborative learning: local and remote.

Teachers often send groups of students off to the library to find information on a topic. It is likely that if four groups go, they will come back with four different perspectives and differing information. If we think of the World Wide Web as a huge, disorganized library, then it is a safe bet that groups of students using the Web for research will return with great variety in their findings.

### Local collaboration

Sharing of information and resources between groups (collaboration) can cut down the research time needed by each group. This type of information searching also opens up some valuable teaching time for the teacher. Questions may arise such as: How do we know this is right? Why don't these documents agree on basic information? Teachers must be prepared to answer these questions.

Around the fourth grade, it is a good idea to introduce the concept of triangulation and cross-checking information. Likewise, what do you do when a child performs a Web search that returns 200,000 hits? Most people don't want to wade through the results. Boolean logic for conducting searches can be taught at this time. These children know the difference between "and," "or," and "not." They can understand that putting a title inside quotation marks will result in a search for the title as a whole as opposed to a search for each word in the title. It is a good idea to first practice these searches off-line using a CD encyclopedia or similar resource.

Students can also connect with students in other places to work together on a project. These sorts of projects include "Travel Buddies," where teddy bears are swapped by a pair of classes. The bear then writes home by e-mail every day (with the help of the children in the host class) and tells of its adventures—the things it has seen, the places it has gone, new experiences, as seen through the eyes of the children of the host class. Travel Buddies can be powerful and exciting learning experiences, especially for younger children.

### Remote collaboration

Other remote collaborations include gathering weather information, comparing tastes in chocolate bars, growing "grass-heads" (and posting the results as photos on the Web), and comparing differing cultural perspectives on matters of global history such as political events and wars.

The *Global Schoolhouse* ([www.gsn.org/project/index.html](http://www.gsn.org/project/index.html)), the *Aussie schoolhouse* ([www.ash.org.au/cprojects/](http://www.ash.org.au/cprojects/)) and *Oz-Teachers* ([rite.ed.qut.edu.au/oz-teachernet/projects/oz-projects.html](http://rite.ed.qut.edu.au/oz-teachernet/projects/oz-projects.html)), are just three places where a start can be made.

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## Communication

**E**-mail is easy. You don't even need a powerful computer to send and receive messages. Children (not to mention adults) love the immediacy of e-mail, and receiving mail from anywhere, but especially from a foreign country, excites and motivates learners.

Here are some ideas that teachers have used successfully:

- Connect kids of different environments: country with city, isolated with crowded, and so forth.
- Exchange designs written in Logo.
- Exchange information regarding local culture and customs. For example, Australian kids might request information regarding Halloween, and Canadians might be interested in ANZAC Day.
- Create "Imagination Network," describing the place where you live and what it's like to live there.
- Swap information on current playground crazes and games: What games do we have in common? Can you describe a game well enough so that someone can play it from your description?
- Discuss local issues: What are the people in your town or city fighting for?
- Compare newspapers: What's on the front page of your local paper today? Your state or national paper?
- Correspond in a second language, with native speakers, perhaps.
- Share local history and anecdotes: What do we have in common?
- Collect and share weather information on a particular day at a particular time.
- Describe the view from your window.
- Describe what you will do this weekend.
- Ask the other class what they can do to find out about where I live.
- Investigate immigration and multiculturalism.

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- Compare and contrast local legends (Aboriginal, Maori, Inuit, Native American, etc.).
  - Conduct a simulation of ground control/space explorers: one group gives commands, the others respond as if they have completed the orders.
  - Co-write a story.

Using e-mail, as opposed to the postal service, allows the exchanges to become a little less formal and more frequent. There are good points and bad points about this. More e-mail generally means higher motivation, and if used and coached well, the pen-pal experience can involve some real cross-cultural learning. Frequent, informal exchanges can also lead to discussions dissolving into banal trivia.

This site ([www.epals.com/](http://www.epals.com/)) provides students with an opportunity to meet and correspond with other students from around the world. Search the online database of classrooms or add yours to the search engine.

Mailing lists are provided by St. Olaf College ([www.stolaf.edu/network/iecc](http://www.stolaf.edu/network/iecc)) as a free service to help teachers and classes link with partners in other countries and cultures for e-mail classroom pen-pal and project exchanges. There are plenty of other places that offer these services as well.

Ask yourself some questions before you begin an online project. What experience do the children in your class have of using the Internet to do these things? Can they write and send e-mail? Do they have any research or note-taking skills? Can they use the sort of program they need to produce Web pages?

**ePALS  
Classroom Exchange**

**Intercultural e-mail  
classroom connections**

# Grouping as an Instructional Strategy

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In traditional, single-graded classrooms, the teacher is responsible for trying to meet the various needs of 20 to 30 students. In the multigrade setting, these needs are even more numerous. To manage both the number of students and their range in ability, grouping strategies have been consistently used.

The Nebraska and Iowa Departments of Education (1993) describe grouping patterns at the primary level:

*In grouping for learning, teachers consider the needs of both individuals and the group. Teachers organize children into various grouping patterns—for example, whole class, large groups, small groups, triads, pairs, and/or children working individually.*

*Teachers choose a grouping strategy which is appropriate to the situation and facilitates optimum learning. The composition of groups affects not only how and what children learn, but also the way children feel about themselves and the way they relate to each other. Heterogeneous (mixed-ability) grouping is the most effective way to maximize student success. Long-term, static ability grouping affects children negatively.*

*Although long-term ability grouping is not acceptable as a constant, grouping children for short periods of time to meet specific instructional needs is appropriate. This type of grouping provides for individualization in that it focuses instruction on the needs of each learner. Individualized instruction does not mean teaching the same lesson over and over again to each child in isolation; it means focusing on the learning needs of the individual, recognizing that more than one child may have similar needs at the same time.*

*Flexible grouping allows the teacher to instruct children on the basis of interests and learning needs. When children are grouped according to interests, not ability, the opportunities to learn from each other are maximized. Children need opportunities to learn cooperatively and to experience the value of collaboration. Ultimately, social interaction leads to better understanding and a consolidation of learning (p. 30).*

## Working With Whole-Class, Mixed-Ability Groups

**W**hat subjects and strategies are appropriate with mixed-ability groups? And what advantages are there for students and teachers in working with these groups in a whole-class format?

Like adults, students benefit from working in group situations where many different competencies, ages, and points of view are represented. The old saying, “Two heads are better than one,” applies here. Students also gain by increased contact with the teacher. In a similar manner, the teacher benefits by having more contact with all the students. Material preparation, monitoring student progress and behavior, and increased student engagement may be realized in working with the whole class.

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Further, whole-class instruction, where students of differing abilities and ages work together, leads to improved student relations. When students are organized and taught by grade levels, a status hierarchy often occurs between the grades. When grades are combined and taught together, this hierarchy breaks down, provided that instruction is organized around principles of cooperation.

As mentioned earlier, using recitation to teach basic skills to the whole class is ineffective because a wide range of abilities cannot be successfully accommodated. In addition, the negative effects of public evaluation using convergent questions stigmatizes lower-performing students. However, several activities work well when instructing to a mixed-ability class:

- Speaking before the group (book reports, sharing, speeches, etc.)
- Enhancing ideas during group discussion
- Unit introductions and reviews, followed by level-specific materials
- Demonstrations of experiments
- Some types of information exchange
- Dramatic presentations and stories
- Problem-solving games
- Managerial issues such as classroom rules, scheduling, and planning
- Use of equipment
- Sponge or anticipatory activities

## Planning for Whole-Class Instruction

**I**n preparing to teach a lesson to an entire multigrade class, careful planning and preparation are necessary. Figure 3 illustrates an example of a whole-class planning form for learning about sea creatures. The teacher would follow three general steps:

1. Choose a concept, theme, or skill determined to be important to all students.
2. Decide on an activity to introduce the concept to the whole class.

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3. Develop appropriate activities for each instructional level and pay special attention to:

- Subject integration (writing, reading, science, math, etc.)
- Needed resources
- References students can use
- How each level will be introduced to their activities
- How students will be evaluated

If a teacher has a narrower range of levels to teach, then several grades could complete the same activity. Another approach when working with a narrow range of student levels is to require the same general activity, but add requirements for higher-performing students.

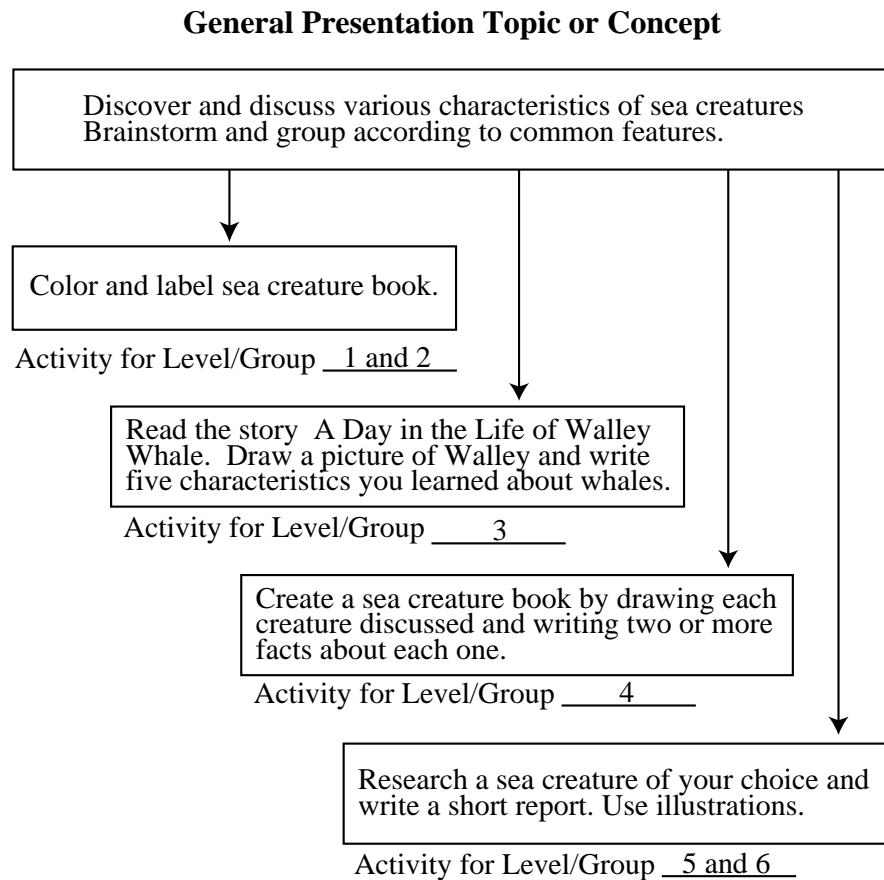
Figure 3 illustrates a process for integrating or combining different subjects into one lesson. Although this lesson focuses on science, students are also engaged in writing, problem solving, art, and research skills. Without integrating subject areas, multigrade teachers would not be able to allocate sufficient time to each subject area.

**Instructions**

The whole class can be taught together when a common topic can be identified that cuts across the different levels. In general, divergent or open-ended tasks are most appropriate.

1. Determine something all students need and write it in the box entitled, General Presentation Topic or Concept.
2. Decide how you will present the topic or concept—games format, discussion, sharing session, and so forth—and put this in your lesson.
3. Enter the activities for each level into the Level/Group boxes. If your lesson is quite detailed, you may wish to use a separate sheet of paper for filling in the details for each level.
4. Prepare the activities and decide how each will be introduced to the different levels. For younger children, you may need to teach the activity directly, but for older, more self-directed students, the instruction may be written.

**FIGURE 3. Whole-Class Planning Form**

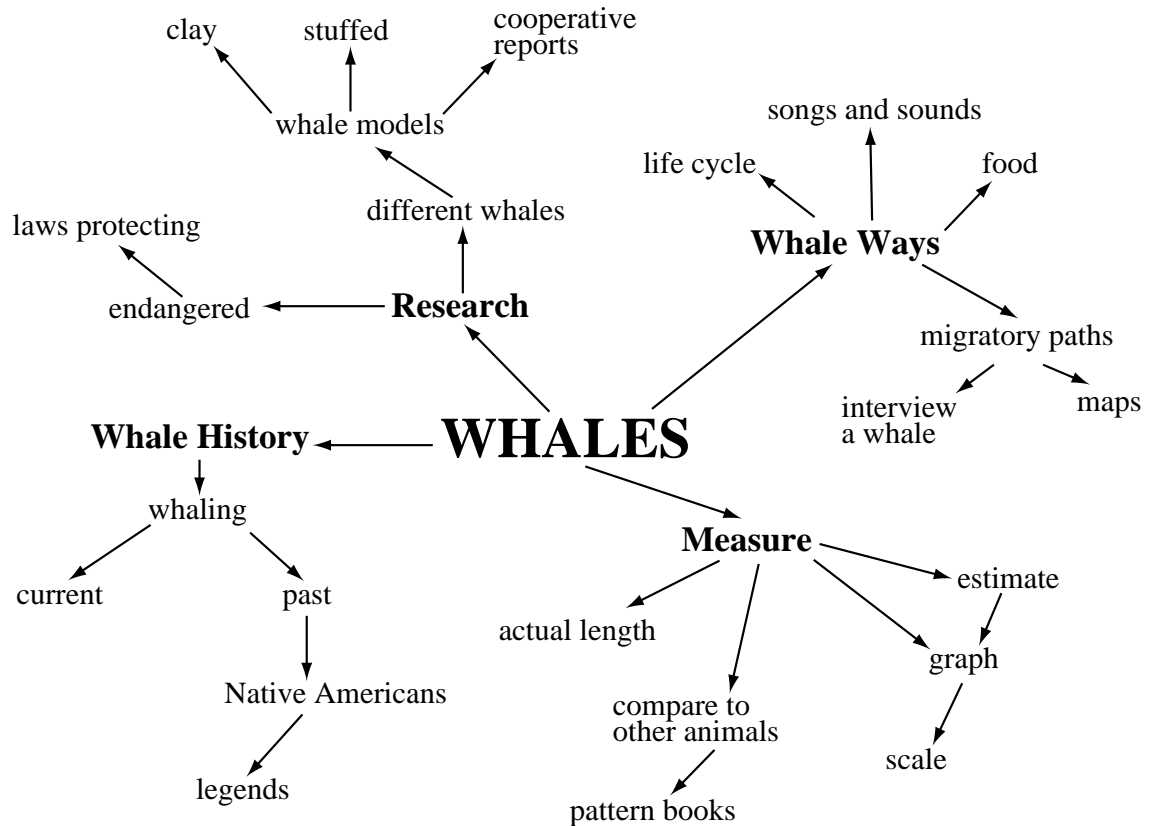


(adapted from *Fogarty, 1979*)

Cathy Griswold (1987), a multigrade teacher from Oregon, has developed a planning process for the integration of different subject areas. Using a process called clustering, Griswold picks a theme and then elaborates different related topics. When clustering, the teacher should keep in mind how topics relate to different subject areas. Figure 4 presents an example of clustering around the theme of whales. From the web of whale-related themes, Griswold suggests that the teacher select topics for lesson development, and then develop objectives and activities appropriate for each level.



**FIGURE 4. An Example of Topic Development**



(adapted from *Griswold, 1987, Whale Lesson*)

### **Ability grouping**

Grouping strategies based on ability are used in various forms in schools and classrooms worldwide, and are certain to arouse discussion, though this is less so in sports and musical areas. The extremes of the debate are probably epitomized on the one hand by students labeled at enrollment to the point that their educational paths are fully determined, and on the other by students clearly in need of a particular educational program but denied it on the basis that all students, no matter how different they and their needs may be, should be provided with the “same” education.

Beneath this often heated debate, the research provides strong support for ability grouping. Grouping on the basis of ability “with appropriate differentiated instruction” is clearly beneficial, not only to high-ability students but also to average and low-ability students (Allan, 1991).

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Grouping strategies can be usefully divided into categories:

- Within-class ability grouping
- “Streaming” classes

Some criticism of ability grouping is based on the supposed negative impact on self-esteem for those students placed in low-ability groups. This does not, in fact, appear to be the case (Allan, 1991), with ability grouping having minor, generally positive effects. Indeed, there appear to be positive effects on the self-esteem of slower learners when instruction is received in homogeneously streamed groups. This is partly offset by slight negative effects for high-ability learners in high-ability groups. The negative effects of labeling seem to be overshadowed by the actual daily comparison students make with others in their classroom.

The negative effects of labeling can be reduced by minimizing any conspicuous nature of the labeling involved (for example, using colors or names of famous people to name groups rather than “advanced,” “normal,” and “remedial”) and by retaining as much flexibility as possible in terms of group selection and revision. The “role model” argument in favor of heterogeneous groups appears flawed, as children of low or average ability do not model themselves on fast learners even when they are in the same class (Schunk, 1987).

The weight of argument in favor of ability grouping appears strong with questions now appropriately shifting to how such ability grouping can be most appropriately handled and whether it should be across all ability levels or targeted largely at the gifted and talented.

Such groupings within mixed-ability classrooms clearly benefit students (Slavin, 1986a). Kulik and Kulik (1987) consider both the within-class ability grouping strategies designed for all students and those targeting only academically talented students. They find the former benefits all students to a small extent, while the latter shows particularly strong advantages for academically talented students.

### **Ability grouping within classes**

The problems of self-fulfilling “labeling” of students in terms of ability level can be minimized by:

- Avoiding conspicuous labeling altogether, allowing groups just to be groups with non-judgmental identifiers if identifiers are required
- Adopting a student-centered approach to learning where expectations are student-initiated rather than teacher-imposed
- Not setting group compositions in concrete, but allowing different students to enter and exit as appropriate, including a degree of self-selection and other broad identification procedures

- 
- Facilitating different groups for different curriculum areas or units

There are a multitude of ways to devise and use ability groups, depending on the teacher, class, and subject area. They can range from teacher-nominated to those with large degrees of self-selection based on predetermined tasks with clearly different levels of ability and motivation required.

**Ability grouping—  
streaming classes**

Kulik and Kulik (1982) found that students permanently streamed in classes based on ability slightly outperformed students in nonstreamed classes, with the effect strongest in high-ability classes, weaker (but still positive) in middle-level classes, and making no difference in low-ability classes. Slavin (1986b) found no significant positive or negative effects for such permanent streaming.

Looking solely at gifted and talented programs, Kulik and Kulik (1987) found that these students performed significantly better than comparable students in mixed-ability classes.

The research is more uniformly supportive of class ability grouping for specific subject areas. This selective streaming is often applied in mathematics and language arts. Slavin (1986b) suggests this can be particularly effective:

- When it is done for only one or two subject areas
- When it reduces the range of subject skill levels in each group
- When the group composition is frequently reviewed
- When teachers vary the teaching pace accordingly

Kulik and Kulik (1987) found selective streaming advantageous even without these constraints.

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## An Analysis of the Research on Ability Grouping: Historical and Contemporary Perspectives

**R**esearchers have struggled for decades to find answers to questions about ability grouping. Does anyone benefit from it? Who benefits most? Does grouping harm anyone? How? How much? Why? Research reviewers have never reached agreement about the findings. For every research reviewer who has concluded that grouping is helpful, another has concluded that it is harmful.

Today, however, reviewers are using statistical methods to organize and interpret the research literature on grouping, and they are more hopeful than ever before of coming to a consensus on what the research says. They have painstakingly catalogued the features and results of hundreds of studies, and, with the help of new statistical methods, they are now drawing a composite picture of the studies and findings on grouping.

Reviews have already shown that the effects of grouping programs depend on their features. Some grouping programs have little or no effect on students; other programs have moderate effects; and still other programs have large effects. The key distinction is among (1) programs in which all ability groups follow the same curriculum, (2) programs in which all groups follow curricula adjusted to their ability, and (3) programs that make curricular and other adjustments for the special needs of highly talented learners.

Programs that entail only minor adjustment of course content for ability groups usually have little or no effect on student achievement. In some grouping programs, for example, school administrators assign students by test scores and school records to high, middle, and low classes, and they expect all groups to follow the same basic curriculum. The traditional name for this approach is XYZ grouping. Pupils in middle and lower classes in XYZ programs learn the same amount as equivalent pupils do in mixed classes. Students in the top classes in XYZ programs outperform equivalent pupils from mixed classes by about one month on a grade-equivalent scale. Self-esteem of lower aptitude students rises slightly and self-esteem of higher aptitude students drops slightly in XYZ classes.

Grouping programs that entail more substantial adjustment of curriculum to ability have clear positive effects on children. Cross-grade and within-class programs, for example, provide both grouping and curricular adjustment in reading and arithmetic for elementary school pupils. Pupils in such grouping programs outperform equivalent control students from mixed-ability classes by two to three months on a grade-equivalent scale.

Programs of enrichment and acceleration, which usually involve the greatest amount of curricular adjustment, have the largest effects on student learning. In typical evaluation studies, talented students from accelerated

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classes outperform non-accelerates of the same age and IQ by almost one full year on achievement tests. Talented students from enriched classes outperform initially equivalent students from conventional classes by four to five months on grade-equivalent scales.

## Guidelines

1. Although some school programs that group children by ability have only small effects, other grouping programs help children a great deal. Schools should therefore resist calls for the wholesale elimination of ability grouping.
2. Highly talented youngsters profit greatly from work in accelerated classes. Schools should therefore try to maintain programs of accelerated work.
3. Highly talented youngsters also profit greatly from an enriched curriculum designed to broaden and deepen their learning. Schools should therefore try to maintain programs of enrichment.
4. Bright, average, and slow youngsters profit from grouping programs that adjust the curriculum to the aptitude levels of the groups. Schools should try to use ability grouping in this way.
5. Benefits are slight from programs that group children by ability but prescribe common curricular experiences for all ability groups. Schools should not expect student achievement to change dramatically with either establishment or elimination of such programs.

# Implications for the Multigrade Classroom

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**M**any of these findings on ability grouping need to be interpreted in light of the unique organizational patterns found in multigrade settings. Taken as a whole, this research evidence strongly supports mixed-ability classroom organization, which is normal in the multigrade classroom. Although this body of research does not reflect the extreme variation in student ability found in multigrade settings, it does provide guidelines for using ability grouping while maintaining the integrity of the heterogeneous class.

## Learning Centers

**L**earning centers are independent stations set up throughout the classroom to cover a variety of academic subjects (math, writing, music). All the learning centers are thematically designed. Many themes can last between three and nine weeks. This makes learning more indepth and meaningful for the children, and the planning and implementation more user-friendly for the teacher.

Center activities are open-ended whenever possible to encourage exploring subjects to a satisfying conclusion. Centers are used for reinforcement, enrichment, remediation, and review. The learning center block of time in an instructional day is often the meat of the program. While students are engaged in independent learning activities, the teacher is allowed to work with students in small groups to teach specific language areas or math skills and to assess the students' progress. In this environment, the teacher is the facilitator of learning rather than the dictator of it. Students are allowed to learn on their own developmental timeline, construct their own meaning, and experience success at their own levels.

## Management of Learning Centers

**M**anagement is the key when using learning centers. The number of centers in a classroom varies between teachers and classroom size. Many teachers have 20 or more centers in the room at a given time. These centers are both fluid and constant to meet academic requirements while allowing for specific learning experiences only available within the given theme.

The constant (or generic) centers are the centers that always exist in the classroom. These would be centers like Poetry, Math, Reference, Big Book, Art, Science, and Publishing. These centers are located in the same part of the room all year, so it is important to make sure they are strategically placed (e.g., Art Center next to the sink or Library Center in a quiet corner).

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These centers do not change, but new content is often added and old content is removed. The fluid centers are activities set up by the teacher that relate specifically to the theme of study. For example, if the class is studying a unit on Native American culture, a special center might be created to sample foods or weave a miniature Navajo rug.

In this type of environment the children play a big part in managing the classroom. Children plan their own day, and teachers are there to facilitate the learning. In many rooms children use planning sheets or contracts to ensure that they are getting a well-rounded learning experience. These planning sheets or contracts can be kept in folders that the student can refer to and keep completed work in. Some rooms have “Must Do” centers and “Choice” time, and credit will be given to students for quality and/or quantity of work.

Because of this, material preparation requires careful planning and organization. The following steps have been identified as important for learning centers to be effective:

1. Select a subject area. *Example: Reading*
2. Determine the skill or concept to be taught, reinforced, or enriched. *Example: To teach the skill of rhyming*
3. Develop the skill or concept into a learning activity: manipulating (cutting, pasting, matching), experimenting (observing, charting, keeping a log), listening, or viewing. *Example: Students will learn about rhyming by listening to a tape of rhymes and matching rhyming words to rhyming pictures.*
4. Prepare the skill or concept into an *applying* activity: filling in, arranging in order, putting together, taking apart, listing, classifying, matching, tracing, writing, locating, or labeling. *Example: Student will apply the rhyming skill to games or worksheets which ask them to fill in the rhyming words, list words which rhyme, and classify words with the same rhyming sounds.*
5. Incorporate the skill or concept into an *extending* activity: comparing, developing your own, researching, reconstructing, finding what other, or deciding what if. *Example: Students will extend their skill or rhyming by writing their own poem, finding out about Edgar Allan Poe, or rewriting a nursery rhyme.*
6. Place all the games, worksheets, charts, etc., together in one area of the room for children to use in a self-selected manner.
7. Develop some form of record keeping and evaluation so that both students and the teacher can account for time spent and learning accomplished at the learning center.

# Putting It All Together

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Using various grouping patterns for reading instruction, a weekly schedule might take on a quite different appearance than the one described earlier.

Time	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
8:30 to 10:30	Reading	Textbook (by level)	Textbook (by level)	Multilevel skill grouping	Learning centers & teacher conferences	Review & interest groups

Many variations of this sample schedule are possible, keeping in mind the need to balance available teacher time, teacher experience, student needs, and maturity levels. Most important, it is better to go slow and plan well than to leap into a new strategy and have it fail.

The two case examples of grouping that follow were submitted by two multigrade teachers during the Ashland, Oregon, conference on multigrade instruction. The first example comes from Joel Anderson, who teaches grades 4–6 at the Onion Creek School in northeast Washington. Anderson's example is especially interesting because it covers a 15-year period of time, describing the different changes that have occurred at Onion Creek School and how they were managed. The second example comes from Barbara Robinson, a K–3 teacher from southern Idaho. Robinson's example illustrates how the community can help ease the demands of grouping across four grade levels. Both case examples illustrate, with rich detail, the ingenuity and creativity of effective multigrade teachers.

## Two case examples



## Case Example 1: History and Philosophy on Grouping at Onion Creek School

By Joel Anderson, Multigrade Teacher, Grades 4–6

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**W**hen I came to Onion Creek School 15 years ago, it was a one-room school. With my wife's help the school was able to have two teachers (for the price of one), which helped me maintain my sanity. She taught first through third, and I taught fourth through sixth.

Since then the school has gone through many changes. Enrollment dropped; my wife found a paying job. I worked for awhile as the only teacher with the help of an aide. Then enrollment increased and my wife was hired to teach primary, and I went back to teaching fourth through sixth. Enrollment increased more; we added kindergarten and another teacher, so for awhile I taught only fifth and sixth. Now I am back to teaching fourth through sixth.

From the beginning, I thought I could only teach the students as one large group, taking into account the individual differences of the students. So we all worked on the same units. We have very few textbooks in our class; most all lessons are designed by me. (Exceptions are our current SRA Spelling series, our Junior Great Books used for interpretive reading discussions, and our Barnell-Loft reading skills series.) Over the years I have designed and redesigned units on different topics in science and health, social studies, reading, and so forth. I present a lesson to all my students together. Some of the topics, especially in language, have been addressed year after year, though I usually change the form of the lesson. In social studies and science, I teach topics on a three-year cycle. (A few topics in social studies that are taught schoolwide to all grades at once are taught on a six-year cycle.) This way we cover most of the material that is covered in most schools over the fourth- through sixth-grade span.

Initially my units were designed for individual work. Students usually did most of the work by themselves. The requirements for each child varied according to the child's grade and/or ability level. I had and still have different expectations for students of different grades, so everyone in my class would work on the same topic but the unit requirements would call for less from the younger students and more from the older ones. Tests and other evaluative methods would take into account the differences in age and ability.

Currently, I still teach units and make a lot of allowances for individual differences, but I now encourage much more cooperative work. Students do much of the work in pairs or small groups. Usually, I choose the group members, but on some occasions students choose their own partners.

I have come to agree with those supporting cooperative learning that individualized learning and competitive learning have many negative aspects, which are especially accentuated in a multigraded class where students are together for two, three, or more years.

When students are together for so long, they need to learn to respect and care for each other. There are bound to be large differences in ability,

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especially when there are students from three grades in the class, but when students work cooperatively with students in higher or lower grades, I find that they all learn. All students have strengths and weaknesses. Having to work in small groups with all the other students in the class, children learn to make use of each other's skills. They help each other more and share their talents. They learn to appreciate the strengths that the other students possess. They learn that in doing so they can best succeed as a group. Working together they also learn tolerance. They don't always like each other, but, again, if they are going to succeed they must be tolerant of each other's quirks and weaknesses.

## Groups

I have my students work in groups as much as possible. Students are seldom grouped by age or grade; in most cases they are put in cross-graded groups. Years ago we got rid of desks and had students sit at tables to encourage group work. In my class students sit three to a table, and during the year each child sits and works with practically everyone else in the class several times. I usually switch seating every two weeks.

## How To Organize Groups

I use this method sometimes to arrange my students in tables or to place them in groups. If I want three in a group, I take three cards of each denomination. Then each child draws a card and goes with the other children who drew the same denomination, say all Aces are in one group, Twos in another, and so forth. This method results in heterogeneous groups. There may be three boys in a group, three children from the same grade, or two girls and a boy each from a different grade. I have found that my students like this method for placing children at tables as long as they draw new tables every two weeks and don't have to sit at the same table or with any of the same people two times in a row.

### Draw cards

Early in the year I wrote the name of each of my students on a little card and placed the card in a jar. I draw names from the jar any number of times throughout the day. When holding a discussion I might draw names of students who are asked to respond or I might draw names of children to respond to a problem; I might draw a name and ask for an answer from any of the children sitting at that child's table; or, when playing a game where children play in pairs, I might draw two names at a time to make pairs. The randomness of this method helps to ensure that children work at times with all the other children in the class, so there might be a low-

### Draw names from a jar

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	achieving fourth-grader working with a high-achieving sixth-grader. The children learn to take into account the others' strengths and weaknesses, and they learn to work together and help each other.
<b>Teacher-made groups</b>	There are a few times when I organize groups. I do this most often when children are playing simulation games or working on large group projects. I try to set up the groups so there is a good mix according to age and ability.
<b>Student-made groups</b>	There are also a few times when I let the students pick their own groups. This most often occurs when students are working on projects, say in social studies or science, and a couple of students want to work together on the same topic.

## Table Groups/Groups of Three or Four

**F**or many of my activities, I organize my students into table groups or groups of three. (Marilyn Burns in *The Math Solution* suggests cooperative groups of four.) I have my students sitting at tables of three students each. My tables are labeled A, 2, 3, 4, 5, 6. These labels correspond to the value of cards, so to place my students I have them draw from a deck of 18 playing cards. Any time I want to change groups, I have the students draw again from the deck of cards. To foster cooperation, I have the students follow three rules (from Marilyn Burns):

1. You are responsible for your own work and behavior.
2. You must be willing to help any group member who asks.
3. You may ask the teacher for help only when everyone in your group has the same question.

These rules encourage good cooperative skills and help to lessen some of the demands on me. Students must work together and help each other (when asked). Rule 3 eliminates many questions about assignments that I've been asked to answer over and over. It also forces students to do more talking among themselves about the assignments. They get more chances to express their ideas and clarify their thinking.

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## When I Use Groups in My Class

When working on computation strand work, students most often work on their own at their own pace. If two (or more) students are working on the same level, they may choose to work together. Or if someone is having problems learning a specific concept, that person may get help from someone at the same table or from anyone else in the room.

**Math—computation**

For about half of our math period, we usually all work together. I may present a short lesson on problem solving, geometry, numbers, and so forth, and may offer problems to be solved. We may work on them as a class and I might draw names of students from the jar to get different responses, or I might ask the students to work on the problems at their table and present one answer agreed upon by all three students at their table.

**Math—problem solving, etc.**

I have an individualized reading program where children usually work on their own. They mostly read graded library books and work on reading skills from a Barnell-Loft series.

**Reading**

I also use the Junior Great Books series. I use this for teaching critical reading skills. I group students according to their reading ability into three groups. I meet with each group once every two weeks for a 45-minute discussion of a story read.

In the afternoons we have SSR (Sustained Silent Reading). Normally students read quietly by themselves for the 15-minute period, but sometimes students pair up with students from the primary class and read with them.

We do a lot of oral work in my class, and students often work together on these activities. For storytelling, students often work by themselves and then in pairs. First they learn a story, then they practice it on a partner (usually of their choosing) until they are ready to tell the story to the class.

**Language—storytelling**

We have done plays when studying fairy tales and legends; we have done them to show specific incidents in history; and we have done them for fun and experience. Usually I draw students' names from a jar to find members for a group. *Aesop in the Afternoon* has a number of plays for small and large groups that are great fun to do.

**Language—plays**

When studying fairy tales this year, I had the three students at each table act out a traditional Grimms' fairy tale. Then as a preliminary exercise for writing their own fairy tales, the groups made up a fairy tale following traditional themes. Then they got together and wrote their own versions of the play they had put on.

My wife has done this activity with my class. At first, my wife chose students for groups because some stories are easier to do than others. Students had to learn the stories and practice them for their small groups. Then they had to practice them in front of their parents. Finally, they did the story for our class or for the preschool or primary students.

**Language—  
tell-and-draw stories**

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**Language—  
oral presentations**

Most oral presentations or reports are done individually, but sometimes students work in pairs or even in groups of three or four to make special reports for science or social studies. Sometimes the students choose their own partners, and sometimes I draw names for groups. The students usually write out a script so each participant knows what to say.

**Language—  
daily oral language**

To help learn grammar, punctuation, and usage skills, we do a daily activity called Daily Oral Language. Two sentences are written on the board with a number of errors. Students are to rewrite the sentences correctly. They work together with the other students at their table, comparing and correcting their papers until they think they have written the sentences correctly. Then I draw a student's name from the jar and ask that person to tell me how to correct the sentence on the board. If the student is correct, all the students at the table are rewarded. Once a week I collect and correct all the papers, and all the students at one table get the lowest grade given to any person at that table.

**Science**

When doing science, all the students in the three grades work on the same activities. I have found that the TOPS units work great. Students get hands-on experiences. I usually have students work together in their table groups so they can interact and help each other out and share their discoveries. Other times we might have units that require book research and oral or written reports. Then I often allow two people to work together on the same topic and make a joint presentation to the class.

**Social studies**

I use a unit approach in social studies. Each student is given a collection of papers that list the required work expected of the child plus a description of the activities that may be done. The requirements vary with the ability level of each child. I expect more from the older students with more ability than I do from the younger students. The unit usually involves a lot of individual work, though I allow students to work with each other on parts of it and to drill each other on such things as map skills. Projects are often a requirement, and, as in science, some of the projects are designed for two or more students. In such cases I allow students to work with a friend if they both chose the same topic, or, if I expect a large group project, I'll draw students' names from the jar to organize them into groups.

I also use simulation games purchased from *INTERACT*. For these activities students have to be in large groups, and in most cases I pick the groups, trying to get a good mixture of students in age and ability.

## Case Example 2: Instructional Grouping at Arbon Elementary School

By Barbara Robinson, Multigrade Teacher, Grades K–3

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**A**rbon Elementary School employs a staff of three: two teachers and an aide. We serve children in kindergarten through sixth grade. Our building has two classrooms, one housing grades K–3 and the other grades 4–6. We have a large, all-purpose room downstairs. Our aide works with the kindergartners under the supervision of the primary teacher.

We frequently have two groups in kindergarten in reading. Those who know the letter sounds begin reading a series called Primary Phonics. Those who don't know the letters or letter sounds begin in a series Getting Ready to Read. The first-, second-, and third-graders are cross-grouped according to reading abilities. There may be as many as seven reading groups, but the upper-level groups are not met with every day.

One day a week the groups from level 1–2 and up read from an SRA kit. These groups are for basal readers and supplementary reading. To decrease interruptions when working with the small groups, we use the “buddy system.” The students must first check with everyone in their group to answer their question before they ask the teacher for help. Language experience activities are taught as a whole-group activity with grades 1–3. The second half of the year the kindergartners participate also.

Students are grouped according to grade level in math. We use some peer tutoring in problem areas but have not used ability grouping in this area. Science is taught by grouping grades 1–3 and 4–6. For grades 1–3, we usually use third-grade material. To do reading assignments or worksheets, we pair up a mature reader with a younger one. Activities and experiments are done as a whole or in groups. The groups are varied according to the project.

In the primary room we group the first and second grades together for social studies. Third grade is taught separately. This arrangement is for instruction from a social studies text. For grades 1–3, we also do social studies units on topics such as Indians, the Lewis and Clark Expedition, Eskimos, and so forth. These units are taught to the whole primary class. The fourth through sixth grades have successfully been taught as a group using a three-year curriculum consisting of Idaho history, United States history, and world history.

In music we started out using Silver Burdett's program, second-grade material for grades 1–3, and fifth-grade material for grades 4–6. This didn't work very well for us. We all lost interest in music. Then, one of our musically talented dads volunteered to teach music, which he did for a year, and that worked well. He taught grades 1–3 and grades 4–6 as two groups. The next year we decided to try recorders. Neither of the teachers had ever played them before, but we both had musical backgrounds, so we thought we'd give them a try. They have been a great success. We started out just teaching the first, second, and third grades together. The next year we added the new first-graders. The past two years we've taught in two groups, first and

### **Reading and language**

### **Math and science**

### **Social studies**

### **Music and physical education**

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second combined and third through sixth. We wrote the music out on large sheets of paper and pinned it to the board. We directed note by note; that ensured that everyone was on the right note at the right time. We do recorders only the second half of the year. In the primary room, the first half of the year we sing and play musical games. We have discovered there are many good children's albums with songs and activities the children enjoy. To help the children learn the lyrics, we print them on large pieces of paper. It's not long before they have them memorized.

In physical education (PE) this past year we have been fortunate in having had talented volunteers from our community to help with instruction. For these subjects the students were grouped with grades 1–3 together and 4–6 together. The kindergartners were sometimes grouped with the first-through third-graders and sometimes worked separately.

## Review

**F**rom reviewing these two case examples, you can see that each teacher relied heavily on the ability of students to work together. Both teachers used some form of a “buddy system” where students helped each other solve problems, thus freeing the teacher to help students without interruption. Students were also grouped across grade levels and taught as a class in numerous subjects, such as language arts, science, and social studies. These are just two of the many strategies multigrade teachers employ to produce effective instruction with a wide range of student abilities.

However, beneath these strategies lies a complex process of teaching and socialization. Students do not just help each other and work cooperatively because the teacher expects it. Successful multigrade teachers translate their expectations for cooperation into actions through modeling, creating opportunities for students to work together, and specifying the characteristics of effective cooperation. During the last 15 years, a growing body of research on cooperation in the classroom has produced invaluable information to aid teachers who want to implement cooperative workgroups in their classrooms. The following section provides an overview of this research along with strategies and guidelines for facilitating cooperation.

# Collaborative Learning

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**E**ffective communication and collaboration are essential to becoming a successful learner (Tinzman, Jones, Fennimore, Bakker, & Pierce, 1990). It is primarily through dialogue and examining different perspectives that students become knowledgeable, strategic, self-determined, and empathetic. Moreover, involving students in real-world tasks and linking new information to prior knowledge requires effective communication and collaboration among teachers, students, and others. Indeed, it is through dialogue and interaction that curriculum objectives come alive. Collaborative learning affords students enormous advantages not available from more traditional instruction because a group, whether it be the whole class or a learning group within the class, can accomplish meaningful learning and solve problems better than any individual can alone.

This focus on the collective knowledge and thinking of the group changes the roles of students and teachers and the way they interact in the classroom. Significantly, a groundswell of interest exists among practitioners to involve students in collaboration in classrooms at all grade levels.

## Characteristics of a Collaborative Classroom

**C**ollaborative classrooms seem to have four general characteristics. The first two capture changing relationships between teachers and students. The third characterizes teachers' new approaches to instruction. The fourth addresses the composition of a collaborative classroom.

In traditional classrooms, the dominant metaphor for teaching is the teacher as information giver; knowledge flows only one way, from teacher to student. In contrast, the metaphor for collaborative classrooms is shared knowledge. The teacher has vital knowledge about content, skills, and instruction, and still provides that information to students. However, collaborative teachers also value and build upon the knowledge, personal experiences, language, strategies, and culture that students bring to the learning situation.

**Shared knowledge  
among teachers and  
students**

Consider a lesson on insect-eating plants, for example. Few students, and perhaps few teachers, are likely to have direct knowledge about such plants. Thus, when those students who do have relevant experiences are given an opportunity to share them, the whole class is enriched. Moreover, when students see that their experiences and knowledge are valued, they are motivated to listen and learn in new ways, and they are more likely to make important connections between their own learning and “school” learning. They become empowered. This same phenomenon occurs when the knowledge parents and other community members have is valued and used within the school.

Additionally, complex thinking about difficult problems, such as world hunger, begs for multiple ideas about causes, implications, and potential



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solutions. In fact, nearly all of the new curricular goals are of this nature—for example, mathematical problem solving—as are new requirements to teach topics such as AIDS. They require multiple ways to represent and solve problems and many perspectives on issues.

**Shared authority among  
teachers and students**

In collaborative classrooms, teachers share authority with students in specific ways. In most traditional classrooms, the teacher is largely, if not exclusively, responsible for setting goals, designing learning tasks, and assessing what is learned.

Collaborative teachers differ in that they invite students to set specific goals within the framework of what is being taught, provide options for activities and assignments that capture different student interests and goals, and encourage students to assess what they learn. Collaborative teachers encourage students' use of their own knowledge, ensure that students share their knowledge and their learning strategies, treat each other respectfully, and focus on high levels of understanding. They help students listen to diverse opinions, support knowledge claims with evidence, engage in critical and creative thinking, and participate in open and meaningful dialogue.

Suppose, for example, the students have just read a chapter on colonial America and are required to prepare a product on the topic. While a more traditional teacher might ask all students to write a 10-page essay, the collaborative teacher might ask students to define the product themselves. Some could plan videotape, some could dramatize events in colonial America, others could investigate original sources that support or do not support the textbook chapter and draw comparisons among them, and still others could write a 10-page paper. The point here is twofold: (1) students have opportunities to ask and investigate questions of personal interest, and (2) they have a voice in the decisionmaking process. These opportunities are essential for both self-regulated learning and motivation.

**Teachers as mediators**

As knowledge and authority are shared among teachers and students, the role of the teacher increasingly emphasizes mediated learning. Successful mediation helps students connect new information to their experiences and to learning in other areas, helps students figure out what to do when they are stumped, and helps them learn how to learn. Above all, the teacher as mediator adjusts the level of information and support to maximize students' ability to take responsibility for learning. This characteristic of collaborative classrooms is so important, we devote a whole section to it below.

**Heterogeneous groupings  
of students**

The perspectives, experiences, and backgrounds of all students are important for enriching learning in the classroom. As learning beyond the classroom increasingly requires understanding diverse perspectives, it is essential to provide students opportunities to do this in multiple contexts in schools. In collaborative classrooms where students are engaged in a thinking curriculum, everyone learns from everyone else, and no student is deprived of this opportunity for making contributions and appreciating the contributions of others.

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Thus, a critical characteristic of collaborative classrooms is that students are not segregated according to supposed ability, achievement, interests, or any other characteristic. Segregation seriously weakens collaboration and impoverishes the classroom by depriving all students of opportunities to learn from and with each other. Students we might label unsuccessful in a traditional classroom learn from “brighter” students, but, more important, the so-called brighter students have just as much to learn from their more average peers. Teachers beginning to teach collaboratively often express delight when they observe the insights revealed by their supposedly weaker students.

Shared knowledge and authority, mediated learning, and heterogeneous groups of students are essential characteristics of collaborative classrooms. These characteristics, which are described below, necessitate new roles for teachers and students that lead to interactions different from those in more traditional classrooms.

## Teacher Roles in a Collaborative Classroom

**A**cross this nation, teachers are defining their roles in terms of mediating learning through dialogue and collaboration. While mediation has been defined in different ways, we define mediation here as facilitating, modeling, and coaching. Most teachers engage in these practices from time to time. What is important here is that these behaviors (1) drive instruction in collaborative classrooms, and (2) have specific purposes in collaborative contexts.

Facilitating involves creating rich environments and activities for linking new information to prior knowledge, providing opportunities for collaborative work and problem solving, and offering students a multiplicity of authentic learning tasks. This may first involve attention to the physical environment. For example, teachers move desks so that all students can see each other, thus establishing a setting that promotes true discussion. Teachers may also wish to move their desks from the front of the room to a less prominent space.

### Facilitator

Additionally, teachers may structure the resources in the classroom to provide a diversity of genres and perspectives, to use and build upon cultural artifacts from the students’ homes and communities, and to organize various learning activities. Thus, a collaborative classroom often has a number of projects or activity centers using everyday objects for representing numerical information in meaningful ways and for conducting experiments that solve real problems. These classrooms also boast a rich variety of magazines, journals, newspapers, audiotapes, and videos that allow students to experience and use diverse media for communicating ideas.

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Facilitating in collaborative classrooms also involves people. Inside the classroom, students are organized into heterogeneous groups with roles such as team leader, encourager, reteller, recorder, and spokesperson. (See Cohen, 1986, for further elaboration.) Additionally, collaborative teachers work to involve parents and community members. Examples are: inviting parents to come and experience the thinking processes involved in conducting experiments using everyday objects so that they can provide such learning experiences at home; involving parents and the community in academic tasks in which their students are engaged; and performing community services such as producing a local newspaper.

Another way that teachers facilitate collaborative learning is to establish classrooms with diverse and flexible social structures that promote the sort of classroom behavior they deem appropriate for communication and collaboration among students. These structures are rules and standards of behavior, fulfilling several functions in group interaction and influencing group attitudes. Particular rules depend, of course, on the classroom context. Thus, teachers often develop them collaboratively with students and review or change them as needed. Examples of rules include giving all members a chance to participate, valuing others' comments, and arguing against (or for) ideas rather than people. Examples of group functions include asking for information, clarifying, summarizing, encouraging, and relieving tension. To facilitate high-quality group interaction, teachers may need to teach, and students may need to practice, rules and functions for group interaction.

Finally, teachers facilitate collaborative learning by creating learning tasks that encourage diversity but that aim at high standards of performance for all students. These tasks involve students in high-level thought processes such as decisionmaking and problem solving, which are best accomplished in collaboration. These tasks enable students to make connections to real-world objects, events, and situations in their own and an expanded world, and tap their diverse perspectives and experiences. Learning tasks foster students' confidence and, at the same time, are appropriately challenging.

**Model** Modeling has been emphasized by many local and state guidelines as sharing one's thinking and demonstrating or explaining something. However, in collaborative classrooms, modeling serves to share with students not only what one is thinking about the content to be learned, but also the process of communication and collaborative learning. Modeling may involve thinking aloud (sharing thoughts about something), or demonstrating (showing students how to do something in a step-by-step fashion).

In terms of content, teachers might verbalize the thinking processes they use to make a prediction about a scientific experiment, to summarize ideas in a passage, to figure out the meaning of an unfamiliar word, to represent and solve a problem, to organize complicated information, and so on.

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Just as important, they may also think aloud about their doubts and uncertainties. This type of metacognitive thinking and thinking aloud when things do not go smoothly are invaluable in helping students understand that learning requires effort and is often difficult for people.

With respect to group process, teachers may share their thinking about the various roles, rules, and relationships in collaborative classrooms. Consider leadership, for example. A teacher might model what he or she thinks about such questions as how to manage the group's time or how to achieve consensus. Similarly, showing students how to think through tough group situations and problems of communication is as valuable as modeling how to plan an approach to an academic problem, monitoring its progress, and assessing what was learned.

A major challenge in mediating learning is to determine when it is appropriate to model by thinking aloud and when it is useful to model by demonstrating. If a teacher is certain that students have little experience with, say, a mathematical procedure, then it may be appropriate to demonstrate it before students engage in a learning task. (This is not to say that the teacher assumes or states that there is only one way to perform the procedure. It is also important to allow for individual variations in application.) If, on the other hand, the teacher believes students can come up with the procedure themselves, then he or she might elect to ask the students to model how they solved the problem; alternatively, the teacher could give students hints or cues.

Coaching involves giving hints or cues, providing feedback, redirecting students' efforts, and helping them use a strategy. A major principle of coaching is to provide the right amount of help when students need it—neither too much nor too little—so that students retain as much responsibility as possible for their own learning.

## **Coach**

For example, a collaborative group of junior high students worked on the economic development of several nations. They accumulated a lot of information about the countries and decided that the best way to present it was to compare the countries. But they were stymied as to how to organize the information so they could write about it in a paper, the product they chose to produce. Their teacher hinted that they use a matrix—a graphic organizer they had learned—to organize their information. When the group finished the matrix, the teacher gave them feedback. In so doing, he did not tell them it was right or wrong, but asked questions that helped them verbalize their reasons for completing the matrix as they did. The principle the teacher followed was to coach enough so that students could continue to learn by drawing on the ideas of other group members.

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## Student Roles in a Collaborative Classroom

**S**tudents also assume new roles in the collaborative classroom. Their major roles are collaborator and active participator. It is useful to think how these new roles influence the processes and activities students conduct before, during, and after learning. For example, before learning, students set goals and plan learning tasks; during learning, they work together to accomplish tasks and monitor their progress; and after learning, they assess their performance and plan for future learning. As mediator, the teacher helps students fulfill their new roles.

### **Goal setting**

Students prepare for learning in many ways. Especially important is goal setting, a critical process that helps guide many other before-, during-, and after-learning activities. Although teachers still set goals for students, they often provide students with choices. When students collaborate, they should talk about their goals. For example, one teacher asked students to set goals for a unit on garbage. In one group, a student wanted to find out if garbage is a problem, another wanted to know what happens to garbage, a third wanted to know what is being done to solve the problem of garbage. The fourth member could not think of a goal, but agreed that the first three were important and adopted them. These students became more actively involved in the unit after their discussion about goals, and at the end of the unit, could better evaluate whether they had attained them.

### **Designing learning tasks and monitoring**

While teachers plan general learning tasks, for example, to produce a product to illustrate a concept, historical sequence, personal experience, and so on, students assume much more responsibility in a collaborative classroom for planning their own learning activities. Ideally, these plans derive in part from goals students set for themselves. Thoughtful planning by the teacher ensures that students can work together to attain their own goals and capitalize on their own abilities, knowledge, and strategies within the parameters set by the teacher. Students are more likely to engage in these tasks with more purpose and interest than in traditional classrooms.

Self-regulated learning is important in collaborative classrooms. Students learn to take responsibility for monitoring, adjusting, self-questioning, and questioning each other. Such self-regulating activities are critical for students to learn today, and they are much better learned within a group that shares responsibility for learning. Monitoring is checking one's progress toward goals. Adjusting refers to changes students make, based on monitoring, in what they are doing to reach their goals. For example, a group of students decided that the sources of information on the Civil War they selected initially were not as useful as they had hoped, so they selected new materials. Another group judged that the paper they had planned to write would not accomplish what they thought it would the way they had organized it, so they planned a new paper.

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Students can further develop their self-regulating abilities when each group shares its ideas with other groups and gets feedback from them. For example, in the first video conference, elementary students were shown collaborating in small groups to define and represent math problems. Working in small groups, the children determined what was being asked in story problems and thought of ways to solve the problems. Then each group shared its ideas with the whole class. Members of the class commented on the ideas. As students developed problem-solving skills with feedback from other groups, they learned more about regulating their own learning, a skill they could use in the future.

While teachers have assumed the primary responsibility for assessing students' performance in the past, collaborative classrooms view assessment much more broadly. That is, a major goal is to guide students from the earliest school years to evaluate their own learning. Thus, a new responsibility is self-assessment, a capability that is fostered as students assess group work.

## **Assessment**

Self-assessment is intimately related to ongoing monitoring of one's progress toward achievement of learning goals. In a collaborative classroom, assessment means more than just assigning a grade. It means evaluating whether one has learned what one intended to learn, the effectiveness of learning strategies, the quality of products and decisions about which products reflect one's best work, the usefulness of the materials used in a task, and whether future learning is needed and how that learning might be realized.

Collaborative classrooms are natural places in which to learn self-assessment. And because decisions about materials and group performance are shared, students feel more free to express doubts, feelings of success, remaining questions, and uncertainties than when they are evaluated only by a teacher. Furthermore, the sense of cooperation (as opposed to competition) that is fostered in collaborative work makes assessment less threatening than in a more traditional assessment situation. Ideally, students learn to evaluate their own learning from their experiences with group evaluation.

# Challenges and Conflicts

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**W**hen teachers and schools move from traditional to collaborative instruction, several important issues are likely to arise. They are important concerns for teachers, administrators, and parents.

## **Classroom control**

Collaborative classrooms tend to be noisier than traditional classrooms. This is a legitimate issue for a number of people. Some teachers believe that noisy classrooms indicate lack of discipline or teacher control. In such situations, they argue, students cannot learn. Collaborative classrooms do not lack structure. Indeed, structure becomes critical. Students need opportunities to move about, talk, ask questions, and so on. Thus, we argue that the noise in a smoothly running collaborative classroom indicates that active learning is going on. However, students must be taught the parameters within which they make their choices. Rules and standards must be stressed from the beginning, probably before any collaboration is initiated, and reviewed throughout the school year.

## **Preparation time for collaborative learning**

Teachers and administrators may believe that new lesson plans must be formed for these classrooms. To a certain extent, they are correct. But many teachers already have created engaging units and activities that are easily implemented in a collaborative classroom. Furthermore, teachers can begin slowly making changes in one subject area or unit within a subject area, probably one they are already very comfortable teaching, and then adding other subjects and units. Teachers can also share their plans with each other. Indeed, if we expect students to collaborate, we should encourage teachers to do the same! Principals and curriculum specialists can also collaborate with teachers to plan effective segments of instruction. Moreover, there is a trade-off between the extra planning time needed and benefits such as less time spent correcting lessons, increased student motivation, and fewer attendance and discipline problems.

## **Individual differences among students**

This information has been touched on in the section on heterogeneous grouping. Nevertheless, many people will still doubt that individual differences can be better addressed in collaborative classrooms than in traditional classrooms with homogeneous grouping.

A major question people have concerns the advantage collaboration affords gifted or high-achieving students. There are two tough issues here. First, many teachers do not believe that low-achieving students have much to contribute to the learning situation; in effect, they feel these students have no prior experiences or knowledge of value. Second, teachers worry that high-achieving students will be held back.

In response to the first issue, many collaborative teachers have expressed surprise when seemingly less-able students have had insights and ideas that went way beyond what teachers expected. Further, if each student contributes something, the pool of collective knowledge will indeed be rich. In answer to the second concern, data suggest that high-achieving students gain much from their exposure to diverse experiences and also from peer tutoring

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(Johnson & Johnson, 1989). Also, students who may be high-achieving in one area may need help in other areas.

Teachers and others also wonder whether shy students can fully participate in a classroom that depends so much on dialogue. We suggest that these students might feel more comfortable talking in small groups that share responsibility for learning. Furthermore, interaction between learners can happen in ways other than oral dialogue; for example, writing and art.

A related concern is that many schools are structured homogeneously, and so an individual teacher cannot form heterogeneous groups without involving changes in the entire school. A whole class of “low” readers is taught by one teacher, “average” by another. High school tracks are even more systematically entrenched. Clearly, these practices are not conducive to collaborative learning and require systemwide restructuring. Individual teachers or groups of teachers can initiate dialogue on the problem, however.

This concern is a difficult one to solve unless major changes in other areas of schooling are also undertaken. Students are used to being graded for individual work; parents expect to know how their students fare in school. School staff and state departments of education depend on traditional assessments. In collaborative classrooms, it is often difficult to assign individual grades. Some teachers give group grades, but many students and parents are uncomfortable with these. Ideally, assessment practices should be changed so that they are consistent with collaboration, with a new view of learning, and with a thinking curriculum.

Many teachers do not feel comfortable allowing students to initiate dialogue, determine topics, or explore perspectives other than the teacher’s. This reluctance is in conflict with the way effective caregivers teach their children in the home. Teachers often have difficulty helping students construct meaning, especially linking the new information to the prior knowledge and culture of the students. In part, this is because many teachers believe that their role is to transmit knowledge; because they are held accountable for teaching discrete skills. In one poignant example, a student teacher’s concern for grammar and punctuation prevented her from seeing the sophistication and meaning in what the child was actually communicating in a book report.

The reluctance people feel when asked to make major changes in the way they do things is clearly the most serious issue of those discussed here. Hardly a person exists who eagerly gives up familiar ways of behaving to attempt something that is unknown and likely to have many implementation challenges.

### **Individual responsibility for learning**

### **Conflict of values**



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## What Is the Research Base for Collaborative Learning? Vygotskian Theory

**L**ev Semenovich, a developmental theorist and researcher who worked in the 1920s and early '30s, has influenced some of the current research on collaboration among students and teachers and on the role of cultural learning and schooling. His principal premise is that human beings are products not only of biology, but also of their human cultures. Intellectual functioning is the product of our social history, and language is the key mode by which we learn our cultures and through which we organize our verbal thinking and regulate our actions. Children learn such higher functioning from interacting with the adults and other children around them.

### **Inner speech**

Children learn when they engage in activities and dialogue with others, usually adults or more capable peers. Children gradually internalize this dialogue so that it becomes inner speech, the means by which they direct their own behavior and thinking. For example, as adults use language such as, "That piece does not fit there; let's try it someplace else," children may initially just imitate this strategy. However, they gradually use it to regulate their own behavior in a variety of contexts. Eventually, this dialogue becomes internalized as inner speech.

There seems to be a general sequence in the development of speech for oneself. When alone, very young children tend to talk about what they have done after they complete an activity. Later, they talk as they work. Finally, they talk to themselves before they engage in an activity. Speech now has assumed a planning function. Later they internalize this speech. Inner speech—conversations we carry on with ourselves—begins as a social dialogue with other people and is a major mode of learning, planning, and self-regulation.

Various experiments demonstrate this self-regulating function of inner speech. Vygotsky reasoned that when people are asked to solve difficult problems or to perform difficult tasks, inner speech will go external, that is, take its more primitive form. In other words, people frequently talk to themselves when they face a problem. This externalization of inner speech is often observed in children. When they engage in familiar, simple activities, they usually do so without talk, but faced with difficult tasks, they may whisper or talk out loud to themselves. Adults do this, too. They often talk themselves through perplexing or unfamiliar tasks such as figuring out how to work a VCR.

Vygotsky noted that children interacting toward a common goal tend to regulate each other's actions. Other researchers (e.g., Forman & Cazden, 1986) have observed that when students work together on complex tasks, they assist each other in much the same way adults assist children. In such tasks, dialogue consists of mutual regulation. Together, they can solve difficult problems they cannot solve working independently.

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Effective caregivers engage in regulating dialogue with children almost naturally. A key phenomenon of such interactions is that caregivers maintain the dialogue just above the level where children can perform activities independently. As children learn, adults change the nature of their dialogue so that they continue to support the child but also give the child increasing responsibility for the task (for example, the adult might say, “Now see if you can find the next piece of the puzzle yourself.”). Jerome Bruner and his colleagues called this *scaffolding*. It takes place within a child’s *zone of proximal development*, a level or range in which a child can perform a task with help. (Piaget refers to this as “teachable moments” when adults stretch a child’s capacity, but stay within what they are capable of understanding.)

## **Scaffolding and development**

The zone of proximal development, scaffolding, and dialogue are especially useful concepts or frameworks for school learning. Vygotsky observed that effective teachers plan and carry out learning activities within children’s zones of proximal development, through dialogue and scaffolding. Florio-Ruane drew five maxims from studies of caregiver-child interactions that illustrate these points and should characterize school instruction.

1. Assume the child (learner) is competent
2. Know the child (learner)
3. Share an interest in the task at hand with the child (learner)
4. Follow the child’s (learner’s) lead
5. Capitalize on uncertainty

Very few teachers have the luxury of teaching children on a one-to-one basis. Fortunately, we now know that tutoring is not, in fact, the only—or even the best—way for students to learn in most situations. Dialogue, scaffolding, and working in one’s zone of proximal development can be accomplished in collaborative classrooms, and are being accomplished in many classrooms today.

Vygotsky also provides us with a framework for thinking about an important function of teaching and the multicultural perspective. His research suggests that school learning enables students to connect their “everyday concepts” to “scientific concepts.” In other words, schools help students draw generalizations and construct meaning from their own experiences, knowledge, and strategies. Knowledge learned in the community and knowledge gained from school are both valuable. Neither can be ignored if students are to engage in meaningful learning.

## **Connecting school learning to everyday life**

Effective teachers help students make these connections by scaffolding and dialogue. In fact, these are the essence of mediating. Teachers plan learning activities at points where students are challenged. Teachers plan activities and experiments that build on the language of students’ everyday

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lives through familiar examples and behaviors, analogies and metaphors, and the use of commonly found materials. Teachers demonstrate, do parts of the task students cannot do, work collaboratively with students where they need help, and release responsibility to students when they can perform the task independently.

# Planning Groupwork

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**P**lanning for cooperative learning activities is absolutely essential if cooperative groupwork is to succeed. The end result of a carefully planned program will well justify the time and effort invested. It is beyond the scope of this paper to give anything more than a brief overview of the key issues involved in implementing cooperative work-group learning. However, at the end of this chapter is a detailed list of resources where information, research, and training may be obtained.

Five general areas must be considered when planning groupwork (Cohen, 1986):

Will they work in very structured tutoring pairs? Will they work at learning centers? Will they work in small teams? Will they be primarily engaged in drill and practice, group investigation, group discussion, or problem solving?

How will students learn the necessary cooperative skills? Will they learn cooperation while engaged in a cooperative activity? Or will you try to prepare them in advance with some direct instruction and modeling?

The tasks you choose will depend on what you want students to learn. However, there are guidelines that will increase the success of your choice. Select tasks that:

- Have more than one answer or more than one way to solve the problem
- Are intrinsically interesting and rewarding
- Allow different students to make different contributions
- Use multimedia
- Involve sight, sound, and touch
- Require a variety of skills and behaviors
- Require reading and writing
- Are challenging

Tasks do not work well for groupwork if they:

- Have unchallenging, single right answers
- Can be done more quickly and efficiently by one person than by a group
- Are too low level
- Involve simple memorization or routine learning

(If you implement cooperative learning through the structural approach of Kagan [1990], then you could begin with structures that require low-level learning.)

**Deciding on how students will work together**

**Deciding on the training program for developing cooperative skills**

**Deciding on the actual tasks your groups will perform**

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**Lay the groundwork  
with great care**

**Decide on how your  
cooperative learning will  
be evaluated**

How are groups to be composed? How will you physically arrange the classroom? How and when will you assign students to groups?

Will there be debriefing sessions after each strategy is tried? Will there be ongoing observation and feedback to work groups? Will students be interviewed?

The secret to successful implementation lies in clarity—students must understand what they are supposed to be doing and where they can turn for help if problems develop. Clarity is attained by having as simple a system as possible.

Much clarity is achieved through careful planning and by training in advance for roles and cooperation. The steps for developing such a management system are briefly summarized here (Cohen, 1986):

1. Cooperative norms need to be taught so students will know how they ought to behave and will enforce these behaviors in others.
2. Students should know which group they are in and where that group is supposed to be meeting; a minimum amount of time should be wasted in getting across this vital information.
3. Public and specific information about who is to play what role and what specific behaviors are expected should be available as described in the previous chapter.
4. Each group should have clear instructions for the task available to them as they work; this will do much to prevent students from having to turn to you as a source of knowledge.
5. Students should have a good, brief orientation from the teacher on the objectives of this task and the criteria for evaluation.

# Conclusion

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**A**dapting the classroom learning environment to the needs of students is a complex and demanding task, especially when teaching a multi-grade class where diversity among classmates is extreme. But outside the classroom, diversity is the normal condition that characterizes life. People must learn to work well with a wide variety of individuals in many different social settings. No single best approach has been defined for problem solving, getting along with co-workers, or learning something new. People learn and manage their lives in a variety of ways. The multigrade classroom, with its wide range of student levels, reflects this real-life diversity better than any other classroom configuration. It is important that teaching methods and grouping patterns reflect the variability of the students being taught and help prepare them to live in our diverse and complex world. Therefore, it is vital, when planning for instruction, to determine the academic, social, and cultural needs of students and to devise plans that best meet those needs.

Of course, it is impossible to develop a unique instructional program that will reflect all these areas and characteristics of each student. But we can plan and organize instruction that will take into account the variability of our students. We know from research on classroom teaching that we often ignore these important student characteristics and forge ahead, teaching the way we were taught. We know that:

- Thirty to 40 percent of the students we teach need to move around, touch, or manipulate to learn best. They are kinesthetic or tactile learners.
- Thirty to 40 percent of the students we teach are visual learners. They need demonstration because they learn quickly through seeing, photographing, drawing, watching films, and real events.
- Students have environmental preferences such as time of day, the need for snacks, light, and placement of furniture, that affect their motivation, interest, and ability.
- Cultural and family influences can often be overlooked by the teacher. A child's language and cultural background can affect the usefulness of a particular strategy and inhibit the student's learning. For example, some Native Americans have customs and traditions that make it extremely difficult for a child to be selected for whole-class recitation. Some groups may find it difficult to work in small groups, while others may have trouble working alone.

And yet, most teaching is primarily auditory, with teaching being “done” to the students by a lecture-recitation mode of instruction. However, only about 25 percent of all children learn best by listening (Multnomah Education Service District, 1983).

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In this book, we have described a variety of instructional methods and grouping strategies that should facilitate multigrade (or multiability) instruction. In no way has this been an exhaustive discussion. For those interested in more detail, a list of resources and references has been included. None of the methods and strategies described here are good or bad for all students, provided they are understood and used in an appropriate manner. This means careful, thorough planning and implementation using a variety of methods and strategies. As always, we must continually assess the impact our instructional practices have on student social and academic growth.

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# Resources

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Blackwood, L. (1987). *More like a school family than just a teacher and his/her students: Is a one teacher school for you?* Anchorage, AK: L.C.'s Manner.

This booklet contains one teacher's opinion on "how to successfully and effectively teach in a small one-teacher school or other multigraded settings in rural Alaska." It also contains useful ideas and strategies that are beneficial to any multigrade teacher.

Available from: L.C.'s Manner  
2440 E. Tudor Road  
Suite 950  
Anchorage, AK 99507

Cohen, E. (1986). *Designing groupwork: Strategies for the heterogeneous classroom* (pp. 207–209). New York, NY: Teachers College Press.

This handbook provides strategies for starting groupwork in your classroom and details the research supporting cooperative workgroups. The book is written in a direct, clear style that makes reading easy.

Available from: Teachers College Press  
Columbia University  
New York, NY 10027

Dyer, T.A. (1989). *Teaching splits: Strategies for combination classrooms*. Unpublished manuscript.

The research paper describes what teachers of combined grades do to successfully cope with a two-grade classroom. Dyer visited more than 10 combination classrooms and interviewed the teachers. This report summarizes his findings.

Available from: Thomas Dyer  
PO Box 47  
Bly, OR 97622

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Good, T.L., & Brophy, J.E. (1987). *Looking in classrooms* (4th ed.). New York, NY: Harper & Row.

This book may be one of the most exhaustive collections of effective teaching information to date. Filled with practical, concrete ideas and strategies drawn from observations of effective teachers, this book is important for every professional library.

Available from: Harper and Row Publishers  
Keystone Industrial Park  
Scranton, PA 18512

Griswold, C. (1987). *Topic development for multi-level classrooms, K-5: Incorporating essential learning skills*. Salem, OR: Oregon Department of Education.

This booklet was developed for the Oregon Department of Education as a resource for helping multigrade teachers integrate essential learning skills across subject areas. Griswold provides sample integrated lessons along with a guide for developing your own lessons.

Available from: Oregon Department of Education  
Public Service Building  
255 Capitol Street NE  
Salem, OR 97310

Hornbeck, D. (1990). *Recommendations related to curriculum*. Frankfort, KY: Legislative Research Commission.

This handbook focuses on instructional organization within the context of curriculum, designing the elements and responsibilities of curriculum organization, its structure, and basic planning consideration for use in the multigrade classroom.

Available from: Kentucky Department of Education  
500 Mero Street, 17th Floor  
Frankfort, KY 40601

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Joyce, B.R., & Weil, M. (1986). *Models of teaching*. Englewood Cliffs, NJ: Prentice Hall.

This book reviews the most common models of teaching, including detailed examples and strategies for implementing each model. Examples of models included are inquiry, concept attainment, inductive thinking, group investigation, and so forth.

Available from:           Prentice-Hall, Inc.  
                                  200 Old Tappan Road  
                                  Old Tappan, NJ 07675

Kagan, S. (1990). *Cooperative learning: Resources for teachers*. San Juan Capistrano, CA: Resources for Teachers.

This book provides a detailed guide for implementing the structural approach to cooperative learning. It includes a guide to resources in cooperative learning and an overview of cooperative learning research. There is a wealth of concrete strategies teachers can use.

Available from:           Resources for Teachers  
                                  27134 Paseo Espada #202  
                                  San Juan Capistrano, CA 92675

Katz, L.G. (1995). *The benefits of mixed-age grouping* [ERIC digest]. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education. (ERIC Document Reproduction Service No. ED 382 411)

This report addresses issues relating to small school organization. Sections regarding the teaching of reading, mathematics, social studies, science, physical education, language arts, and art are presented. Aspects such as objectives, content, methodologies, organizing time and space, and resources are also discussed.

Available from:           ERIC  
                                  3900 Wheeler Avenue  
                                  Alexandria, VA 22304-6409

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Katz, L.G. (1996). Addressing the potential risks of mixed-age grouping. *MAGnet Newsletter on Mixed-Age Grouping in Preschool and Elementary Settings*, 5(1). Retrieved September 27, 2000, from the World Wide Web: [www.ericece.org/pubs/mag/magfal96.html#c](http://www.ericece.org/pubs/mag/magfal96.html#c)

Every method of grouping children has risks. One concern with mixed-age grouping is ensuring that younger children are not overwhelmed by older or more competent ones. This book discusses the roles and responsibilities teachers have in maximizing the potential benefits of the age mixture by encouraging children to turn to each other for explanations, directions, and comfort. Teachers are also encouraged to let older children read stories to younger ones, and to listen to younger students read.

Available from:               ERIC  
                                      3900 Wheeler Avenue  
                                      Alexandria, VA 22304-6409

Oldfield, M.J. (1963). *Tell and draw stories*. Minneapolis, MN: Creative Storytime Press.

This book was recommended by Joel Anderson, a multigrade teacher from Onion Creek School in northeast Washington. Anderson says this is an excellent resource for writing activities.

Available from:               Creative Storytime Press  
                                      PO Box 572  
                                      Minneapolis, MN 55454

Slavin, R.E. (1986). *Using student team learning* (3rd ed.). Baltimore, MD: Johns Hopkins University, Center for Research on Elementary and Middle Schools.

This teacher's manual describes a set of practical instructional techniques that involve students in cooperative activities built around the learning of school subjects. These are techniques developed and researched at Johns Hopkins University, plus related methods developed elsewhere.

Available from:               The Johns Hopkins Team Learning Project  
                                      Center for Research on Elementary and  
                                      Middle Schools  
                                      Johns Hopkins University  
                                      3505 North Charles Street  
                                      Baltimore, MD 21218

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Stone, S.J., & Christie, J.F. (1996). Collaborative literacy: Learning during sociodramatic play in a multiage (K–12) primary classroom. *Journal of Research in Childhood Education*, 10(2), 123–133.

This article reviews collaborative grouping strategies, outlining characteristics of a collaborative classroom, teacher's roles, and challenges and conflicts within collaborative classrooms. It provides specific information on how to develop collaborative partnerships in the classroom.

Vail, N.J., & Papenfuss, J.F. (1982). *Daily oral language*. Racine, WI: D.O.L.

Daily Oral Language is recommended by numerous multigrade teachers. It is a booklet of sentences that need to be edited and rewritten. The teachers who recommended it said they used them as a daily “sponge” or warm-up activity before lessons began.

Available from: D.O.L. Publications  
1001 Kingston Avenue  
Racine, WI 53402

Villa, R., & Thousand, J. (1993). Enhancing success in heterogeneous classrooms and schools: The powers of partnership. In D. Summer (Ed.), *Multiage classrooms: The ungrading of America's schools. The multiage resource book* (pp. 51–61). Peterborough, NH: Society for Developmental Education.

The authors present the underlying concepts regarding cooperative learning. Steps for implementing cooperation in your classroom and the research supporting it are also presented.

Available from: Society for Developmental Education  
125 N. West Street  
Peterborough, NH 63452



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# The Multigrade Classroom

## A Resource for Small, Rural Schools



Book 6: Self-Directed Learning



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 6: Self-Directed Learning**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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- Cohen, E. (1986). *Designing groupwork: Strategies for the heterogeneous classroom* (pp. 207–209). New York, NY: Teachers College Press. (Reprinted with permission of publisher.)
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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.

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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.

# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.

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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.



# Participants in the Multigrade Conference

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**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaumakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*W.W. Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age interactions through tutoring and shared discovery. Social competence develops

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for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In

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this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.



# Contents

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# What Is Self-Directed Learning?

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**T**he challenge for the multigrade teacher is to meet the individual needs of students in a classroom setting characterized by multiple levels of ability, achievement, and social and physical development. Although regular, single-grade classrooms also have diverse student levels, differences found in the multigrade classroom lead to increased demands on teacher time and effort. Multigrade teachers, therefore, must be well-organized, resourceful, and able to develop self-direction in students.

A touchstone of effective learning is that students are in charge of their own learning; essentially, they direct their own learning processes. In a discussion of indicators of engaged, effective learning, Jones, Valdez, Nowakowski, and Rasmussen (1995) describe characteristics of students who are responsible for their own learning. One characteristic is a student's ability to shape and manage change, in other words, to be self-directed. Covey (1989) recognizes the importance of self-directedness, which he calls proactivity, by including it as one of the habits characterizing highly effective individuals:

*It means more than merely taking initiative. It means that as human beings, we are responsible for our own lives. Our behavior is a function of our decisions, not our conditions. We can subordinate feelings to values. We have the initiative and the responsibility to make things happen (p. 71).*

Educators can nurture student self-direction and personal efficacy by providing students with opportunities before, during, and after instruction to exercise some control over their own learning. This does not mean students make all the decisions, and it does not mean reverting to the curriculum of "personal relevance" of the '60s or the "child-centered curriculum" of years ago. An emphasis on student self-direction and efficacy means that students are taught and engaged in specific strategies that offer them opportunities to make decisions and solve problems on their own without being told what to do at all times. It means providing students with strategies designed to help them process information effectively and be self-confident, believing that they have the ability to succeed. And perhaps most important, we help students become more reflective about their thinking and learning processes.

Specific strategies include encouraging students to set their own goals for personal development and instructional improvement, and planning ways to achieve these goals. According to Hom and Murphy (1983):

*A growing body of research indicates that when students are working on goals they themselves have set, they are more motivated and efficient, and they achieve more than they do when working on goals that have been set by the teacher (p. 104).*



# Conditions That Promote Self-Directed Learning

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**W**hat kind of environments have been found to be conducive to the development of self-directed learners? Knowles (1975) clarifies the distinction between traditional, teacher-directed learning environments and those reflecting an emphasis on self-direction. Table 1 provides an overview of Knowles' findings, indicating the underlying assumptions about the learner and their implications for the learning environment.

**TABLE 1. Assumptions Regarding Teacher-Directed Versus Self-Directed Learning Environments**

Assumptions About the Learner	Teacher-Directed Environment	Self-Directed Environment
View of the learner	Dependent	Independent
Role of the learner's experience	Starting point, but not essential	Rich resource, essential for learning
Learning readiness	Varies by maturity level	Develops by tasks and problems
Learner orientation	Subject- or content-centered	Task- or problem-centered
Learner motivation	External rewards or punishments	Intrinsic, curiosity-based
		<i>(Knowles, 1975, p. 60)</i>

As Table 1 emphasizes, incorporating self-directed learning into any classroom requires more than just shifting to a different instructional approach. Self-directed learning demands a fresh look at assumptions about the learner, learning, self-motivation, and the classroom environment. Despite the apparent value of fostering self-directed learning activities in any classroom, research on the appropriate methodology for achieving it is sketchy, but growing rapidly.

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## Issues and Concerns

**T**homas, Strage, and Curley (1988) examine five challenges related to self-directed learning:

1. Much is still to be learned about the spontaneous development of self-directed or autonomous learning behaviors. Research hasn't shown, for example, why certain children are more likely to be successful independent learners than others.
2. What is known about self-directed learning gathered primarily from laboratory observations suggests that classroom applications can be powerful, but implementation will be challenging. Developmental research on learning indicates that independent, self-directed learning activities are closely tied to physical maturity.
3. Teacher-directed learning has a well-developed repertoire of instructional strategies and techniques. Self-directed learning has no comparable collection of proven practices.
4. Teachers may have a great deal of difficulty learning how to share control of instruction with students. Teachers are taught to make the decisions in the classroom, and helping students make their own decisions will conflict with some teachers' learned experiences as well as their feelings about being in charge. The reorientation toward a student-owned classroom requires not only a cognitive reorientation but an affective one, as well. For some teachers this is a most difficult challenge.
5. Similarly, students who are used to relying on teachers to give them structure, direction, and information will have to learn to start asking themselves, "What can I do before I ask an adult?"

Self-directed learning activities are of primary concern to those multi-grade instructors who have prized self-directed learners and have recognized the importance of encouraging their development. It could be argued that one of the highest concerns of education in general is the creation and nurturing of self-directed learners. An adult who has not incorporated the skills of independent, self-directed learning will go through life with a tremendous handicap.

Although research on self-directed learning is still in the formative stage, guidelines for the development of classroom activities that allow and encourage autonomous learning are emerging. Since many students do grow into independent learners, it is obvious that some current classroom practices do encourage independent learning. An excellent starting point for developing self-directed learning is to observe student behaviors.

# Self-Directed Learning Behaviors

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**S**elf-directed learning behaviors can be classified into two broad categories: cognitive and behavioral. Behavioral activities, or self-management activities, include motivation and volition (will or determination), time management, and maintaining effort. Cognitive activities include mental processes that select, elaborate, organize, monitor, or otherwise process information.

Table 2 presents self-directed learning categories related to student self-management.

**TABLE 2. Classes of Self-Directed Learning: Self-Directed Management Activities**

Category	Example Activities
Time Management	Recognizing time requirements Keeping track of elapsed time Scheduling sufficient time Distributing time according to tasks
Effort Management	Establishing a productive study environment Setting learning and achievement goals Initiating effort Finding materials Maintaining attention
Motivation or Volition	Monitoring attention Assessing strength and weaknesses of study habits Tracking time- and effort-management activities

*(adapted from Jones, et al., 1995)*

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In the multigrade classroom, self-management activities tend to be of first concern to the teacher. Students who can manage their time, follow schedules, find needed resources, and stay on task until assignments are completed facilitate the teacher's ability to manage the diverse levels found in the classroom. Successful multigrade teachers create environments that encourage these skills.

Phil Gillies, a fourth-, fifth-, and sixth-grade teacher from southern Idaho, points out that once students develop the work habits necessary for his classroom, they quickly teach them to younger students. "It was interesting that during the third year as a multigrade teacher, I noticed that those students I had for two years would say to the new fifth-graders, 'This is what you have to do, this is the way we handle the class.'" A process of socialization occurred in Gillies' classroom where younger students learned from older ones what the teacher expected in terms of classroom routines.

Table 3 presents cognitive categories associated with self-direction, along with example activities for each category. Unfortunately, these skills are seldom explicitly taught. This is due to a lack of knowledge on the part of practitioners about how best to teach them and to the failure of instructional materials to provide direction and activities (Jones, et al., 1995).

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**TABLE 3. Classes of Self-Directed Learning: Cognitive Activities**

<b>Category</b>	<b>Example Activities</b>
Selection	Finding essential information and rejecting nonessential information Taking notes Highlighting main ideas
Comprehension	Previewing material Using context clues Consulting resources and references
Memory Enhancers	Reviewing material Mnemonic tests Self-tests Devising appropriate study strategies
Elaboration	Self-questioning Imagery Metaphors and analogies
Integration	Paraphrasing material Relational aids (charts, timelines) Using multiple but related sources Tapping prior knowledge Answers that extend beyond requirements
Monitoring	Recognizing what hasn't been mastered Awareness of personal strengths and weaknesses

*(adapted from Jones, Valdez, Nowakowski, & Rasmussen, 1995)*

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## Student Benefits

**C**reating and maintaining a classroom atmosphere conducive to self-directed learning benefits both students and teachers. A self-directed student or, in simpler terms, a “good” student, enjoys significant advantages over students who are deficient in self-direction. Classrooms with self-directed students provide superb role models for weaker or younger students to emulate. This is why multigrade teachers tend to devote the greatest amount of time to younger students who have not developed self-directed skills. Therefore, by enhancing students’ self-direction, multigrade teachers can devote a larger percentage of time to students with the greatest need. In other words, self-directed learners allow the teacher to work intensively with small groups or individuals who need additional support.

As the multigrade teacher emphasizes self-directed learning, a more efficient learning environment is created. One of the benefits of increased self-directed behavior is the accompanying increase in the amount of academic learning time. Academic learning time (ALT) is directly related to student achievement; that is, more academic learning time leads to higher student achievement.

Encouraging students to have greater control over their learning improves their feelings of personal effectiveness and increases their motivation to learn. This bolstered sense of self-control should improve the likelihood of success in subsequent educational experiences. As the academic demands placed on students grow, so does the need for an assumption of personal responsibility for learning.

# Implications for Classrooms

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**G**iven that self-directed learning skills and behaviors are of considerable benefit to both students and teachers, what can teachers do to aid their development? Can assignments and activities be structured so that students gradually acquire the skills necessary to work independently? What instructional approaches best augment self-directed skill acquisition?

Before proceeding with general guidelines and suggestions for increasing the likelihood of self-directed student behaviors, the issue of student maturity and development must be briefly explored. Teacher expectations for student competence can be set too high or too low, with equally negative effects. Students who are overwhelmed by the complexity of an academic task will protect themselves by opting out of it in the initial stages. Students who are insufficiently challenged, or who face repetitive tasks with little relevance to their skill levels, may become bored, disengage themselves from the activity, or perform half-heartedly. Careful consideration must be given, then, to the age, maturity, and competence of the student(s) before designing or initiating self-directed learning activities. Thomas et al. (1988) identify four general components of instructional activities that enhance self-directed learning:

1. Appropriate academic demands
2. Adequate instructional supports
3. Opportunities to learn and practice effective self-directed learning activities
4. Appropriate classroom goal structure

Academic demands should be structured so they are challenging but not frustrating. Expectations should be explicit and specific. That is, they should build on skills already mastered, yet force or encourage the learner to attempt new, more advanced skills. An academic task that places limited or no demands on a student will not reinforce self-directed learning strategies.

Instructional supports are activities or materials that provide feedback and progress checks or otherwise guide the student toward an academic goal. These supports should not replace the self-directed learning activities of the student, but rather should be a framework for the student's own efforts. For example, presenting the student with a list of main ideas from a chapter is not supportive, but presenting the student with the characteristics of a main idea is. Students will, in the latter case, discover the main ideas on their own and strengthen their cognitive abilities.

The more opportunities provided to students for practicing self-directed learning, the more likely they are to acquire self-directed learning skills. It is best, therefore, that the classroom climate emphasize self-directed learning. This means that students will come to expect that they will monitor their own progress, be aware of their own skill levels, and be able to identify and gather the resources required to complete progressively more challenging academic tasks.

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Of special interest to multigrade classroom teachers is the emphasis that self-directed learning places on eliminating the competitive climate from a classroom and replacing it with a cooperative atmosphere. Self-directed students must operate in an environment where learning is viewed as a benefit and a necessity for all, instead of a reward for the talented.

Table 4 displays general conditions for optimizing self-directed learning activities:

**TABLE 4. Conditions That Encourage Self-Directed Learning and Student Motivation**

- 
- Rewards that are contingent on specific outcomes
  - Goals and a reward system that are public knowledge
  - Feedback that is frequent, immediate, and contingent on performance
  - An individualistic, noncompetitive environment
  - Evaluation based on specific, objective criteria
  - Evaluation that is private, not public
  - Rewards dispensed for effort, not just ability
  - Autonomy, including the opportunity for self-scheduling and reinforcement
  - Attribution of success to effort, not natural ability
- 

Multigrade classrooms should be at the forefront of future developments in self-directed learning activities, methods, and assessments. Multigrade classrooms, in fact, will be a source for many of the promising practices identified in this area. It is important to note that all of the four components of self-directed learning activities—appropriate demands, instructional supports, adequate opportunity, and appropriate goal structures—must be in place before self-directed learning will prosper. Demands without support, or excess support without concomitant demands, will not succeed.



# Activities for Developing Self-Direction

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**W**hat are some specific activities that multigrade teachers can do to foster self-direction? Thuy-Kim (n.d.) describes a series of activities to help students make the transition from teacher-directed learning to self-directed learning. Although many of these activities were designed for high school students, they can be easily applied to other levels of schooling. Table 5 presents activities designed for the teacher, and Table 6 presents those designed for students. In both tables, the activities in the left column are those that should occur first. As one moves to the right column, the requirements for student self-direction increase. This means, for example, that the last activity in Table 6 assumes that the student has a high level of self-direction.

**TABLE 5. Teacher Learning Activities for Fostering Self-Direction in Students**

Help students visualize the experience of self-direction. Model self-direction.	Establish one-to-one conferences to discuss the individual's learning behavior and progress.
Teach students to value self-directed learning by communicating how valuable it is to the teacher.	Clarify the teacher and student roles in a self-directed learning environment.
Help each student create a self-fulfilling prophecy of success as a self-directed learner. During interviews, conversations, planning sessions, and progress reviews, reinforce growth in self-direction.	Provide students with opportunities to be self-directed and provide support when they need it. However, do not "rescue" them.
Organize a process such as contracting to structure time and effort. Set expectations and limits. Help students explore alternative activities.	Model respect for self-directed learning and encourage respect among the students.
Teach the new skills students require, such as goal setting, time management, and locating information.	Secure written commitment in a detailed learning contract and public commitment in peer groups.
Make opportunities for students to demonstrate their accomplishments. Reward them for their efforts.	Establish work groups where students learn to complete tasks and projects cooperatively and with minimal teacher supervision.
	Model honesty and risk-taking. Reaffirm the value of challenge, struggle, and personal growth.

*(adapted from Thuy-Kim, [n.d.])*

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**TABLE 6. Student Learning Activities for Fostering  
Self-Direction in Students**

Students compile a list of self-directed learners and then list their personal characteristics: ways of learning and skills common among them. Produce a profile of the successful self-directed learner.	Students practice self-directed skills on new, challenging tasks.
Students set goals for how they would like to become more self-directed. List behaviors that would show progress.	Peer groups discuss behavioral changes achieved and successes accomplished by each individual.
Students assess their progress toward meeting their goal.	Students write contracts and practice skills. They also explore alternative learning activities.
Use heterogeneous, small-group projects to allow for modeling leadership in self-directed activities by successful students.	Students gain reinforcement by tutoring peers and presenting completed projects as evidence of success.
Students rate themselves on scales of time management, organization, accomplishment, and resource identification.	Students engage in projects where indepth mastery in one area is required.

*(adapted from Thuy-Kim [n.d.] )*

# Conclusion

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**S**elf-directive behaviors are vitally important in the multigrade classroom. Students who can work independently, set goals, manage their time, and locate needed resources free the teacher to help students with the most need. However, developing self-direction is difficult and requires a learning environment different than the traditional, teacher-directed classroom. Self-direction is best fostered in a classroom where the teacher structures activities that develop such characteristics as independence, self-management, and cooperation. Such environments are also characterized by teacher expectations that reward risk-taking, personal goal-setting, and task completion. Even though the development of conditions that nurture self-directed learning may require extra effort and the rethinking of many assumptions about the learner, the benefits for both the teacher and the student are significant.

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Available from: Eric Clearinghouse on Information Resources  
5207 University of Oregon  
Eugene, OR 97403

Costa, A.L. (1991). *Developing minds*. Alexandria, VA: Association for Supervision and Curriculum Development.

This staff development program is designed to increase students' true thinking time by helping teachers improve their classroom questioning techniques. Asking more effective classroom questions can encourage all students to think at higher cognitive levels and ask questions of their own that will ultimately lead to improved learning.

Available from: Appalachia Educational Laboratory  
PO Box 1348  
Charleston, WV 25325

Della-Dora, D., & Blanchard, L. (Eds.). (1979). *Moving toward self-directed learning: Highlights of relevant research and of promising practices*. Alexandria, VA: Association for Supervision and Curriculum Development.

This book reviews the research on self-directed learning, provides practical strategies, and presents background information useful to anyone working to develop self-directed learning in students.

Available from: Association for Supervision and Curriculum Development  
225 North Washington Street  
Alexandria, VA 22314

McKisson, M. (1983). *Chrysalis: Nurturing creative and independent thought in children*. Tucson, AZ: Zephyr Press Learning Materials.

*Chrysalis* consists of eight units designed to develop thinking, creativity, appreciation of self and others, self-reliance, and abilities in independent learning and research skills.

Available from: Zephyr Press Learning Materials  
430 South Essex Lane  
Tucson, AZ 85711

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North Central Regional Educational Laboratory. (1995). *Critical issue: Working toward student self-direction and personal efficacy as educational goals*. Oak Brook, IL: Author. Retrieved September 26, 2000, from the World Wide Web: [www.ncrel.org/sdrs/areas/issues/students/learning/lr200.htm](http://www.ncrel.org/sdrs/areas/issues/students/learning/lr200.htm)

This article describes characteristics of students who are responsible for their own learning. One characteristic is a student's ability to shape and manage change, in other words, self-directed. Great emphasis is placed on recognizing the importance of self-directedness, which is often referred to as proactivity. The book encourages teachers to provide opportunities for students to take initiative. Students should be responsible for their own learning and lives.

Available from:           Efficacy Institute  
                                  128 Spring Street  
                                  Lexington, MA 02173

Piskurich, G.M. (1993). *Self-directed learning: A practical guide to design, development, and implementation*. San Francisco, CA: Jossey-Bass.

You will learn how to develop self-directed learning packages that are applicable in many situations, from basic industrial and technical skills training to academic classroom training. This detailed but easy-to-use guide shows you how to match training needs with organizational needs, determine tasks that must be learned to meet those needs, and develop objectives and design materials that are in line with those needs.

Available from:           Jossey-Bass  
                                  350 Sansome Street  
                                  San Francisco, CA 94104

Pressley, M., Wood, E., Woloshyn, V., Martin, V., King, A., & Menke, D. (1992). Encouraging mindful use of prior knowledge: Attempting to construct explanatory answers facilitates learning. *Educational Psychologist*, 27(1), 91–109.

This article explores strategies for encouraging self-directed learning. Students learn more effectively when they already know something about a content area and when concepts in that area mean something to them and to their particular background or culture. When teachers link new information to the student's prior knowledge, they activate the student's interest and curiosity, and infuse instruction with a sense of purpose.

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# **The Multigrade Classroom**

## **A Resource for Small, Rural Schools**



Book 7: Planning and Using Peer Tutoring



Northwest Regional Educational Laboratory

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# **THE MULTIGRADE CLASSROOM: A RESOURCE HANDBOOK FOR SMALL, RURAL SCHOOLS**

## **Book 7: Planning and Using Peer Tutoring**

November 1999

Rural Education Program

Based on the September 1989 publication  
of the same title written by Bruce A. Miller

Susan Vincent, Editor

Joyce Ley, Director



Northwest Regional Educational Laboratory  
101 S.W. Main Street, Suite 500  
Portland, Oregon 97204

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# Overview

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## **Preface**

The preface describes the process used in developing this handbook, including the multigrade teachers who shared their classroom strategies and ideas for improving the usefulness of the handbook.

## **Introduction**

The history of multigrade classroom instruction is presented, along with the background information that describes why multigrade instruction is an important and complex issue for educators.

## **Book 1: Review of the Research on Multigrade Instruction**

In this book, the research on multigrade instruction is reviewed in order to answer two questions: (1) What effect does multigrade instruction have on student performance? and (2) What kind of training is needed in order to teach in a multigrade classroom? Detailed information focusing on organizing and teaching in a multigrade classroom is also presented.

## **Book 2: Classroom Organization**

This book describes strategies for arranging and organizing instructional resources and the physical environment of the classroom. Sample classroom layouts and a “design kit” for organizing your classroom are also included.

## **Book 3: Classroom Management and Discipline**

Establishing clear expectations for student behavior and predictable classroom routines has been shown to improve student performance. In this book, research relating to classroom management and discipline are presented, along with a checklist for planning management routines and discipline procedures.

## **Book 4: Instructional Organization, Curriculum, and Evaluation**

Research-based guidelines for planning, developing, and implementing instructional strategies are presented. This book emphasizes the development of cooperative work norms in the multigrade classroom and explains how to match instruction to the needs of students. An overview of curriculum and evaluation planning concepts is also provided. This book is a close companion piece with book 5: Instructional Delivery and Grouping.

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**Book 5: Instructional Delivery and Grouping**

This book emphasizes that instructional quality and student grouping are key components for success in the multigrade classroom.

Instructional methods such as recitation, discussion, and cooperative learning are reviewed. Planning guides and examples are also included where appropriate. Strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students, are discussed.

**Book 6: Self-Directed Learning**

Developing skills and strategies in students that allow for a high level of independence and efficiency in learning, either individually or in combination with other students, is essential in the multigrade classroom. Ideas for developing self-direction are presented in this book.

**Book 7: Planning and Using Peer Tutoring**

This book provides guidelines for developing skills and routines whereby students serve as “teachers” to other students within and across differing grade levels. The research on what makes for effective tutoring in the classroom is also reviewed.

# Preface

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**T**he development of this handbook began in 1987, when a group of people involved in rural education raised several issues regarding multigrade classroom instruction.

In their discussions, members of the advisory committee for the Northwest Regional Educational Laboratory's (NWREL) Rural Education Program agreed that multigrade teacher training in their respective states was either lacking or wholly inadequate. They also were concerned about the availability of research and training materials to help rural multigrade teachers improve their skills.

As a result of these concerns, the Rural Education Program decided to develop a handbook to assist the multigrade teacher. The handbook evolved in several stages. The first was a comprehensive review, conducted by Dr. Bruce Miller, of the research on multigrade instruction that included articles, books, and research reports from the United States, Canada, Australia, and other countries.

From this review, six topic areas emerged that are considered essential for effective multigrade instruction: classroom organization; classroom management and discipline; instructional organization, curriculum, and evaluation; instructional delivery and grouping; self-directed learning; and planning and using peer tutoring. Dr. Miller developed the handbook around these six instructional areas, and a draft was completed in June 1989, with support from the Office of Educational Research and Improvement (OERI).

The second stage occurred in July 1989, when a conference was held in Ashland, Oregon, with multigrade teachers who were recommended by educational leaders from throughout the Northwest and Pacific Island regions.

During the conference, participants were organized into workgroups, each focusing on one of the topic areas. Their tasks were to review the appropriate handbook chapter for clarity and content, to suggest alternative and/or additional instructional strategies to those presented in the handbook, and to write case descriptions of activities drawn from their classrooms. For example, Joel Anderson from Onion Creek Elementary in Colville, Washington, described how he grouped students for cooperative learning. Darci Shane from Vida, Montana, presented a school handbook she had developed for parents that included a class schedule and other school-related information. (A full list of participants appears at the end of this preface.) The final handbook was completed by Dr. Miller in September 1989.

Based on the growing interest and research on multigrade instruction the handbook was revised and updated in 1999, also with support from OERI. The final version, completed with support from the Institute of International Education (IIE), is now composed of a series of seven stand-alone books.



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Book 1: Review of the Research on Multigrade Instruction  
Book 2: Classroom Organization  
Book 3: Classroom Management and Discipline  
Book 4: Instructional Organization, Curriculum, and Evaluation  
Book 5: Instructional Delivery and Grouping  
Book 6: Self-Directed Learning  
Book 7: Planning and Using Peer Tutoring

## Purpose and Scope of the Handbook

**T**he handbook has been written to serve three general purposes:

- To provide an overview of current research on multigrade instruction
- To identify key issues teachers face when teaching in a multi-grade setting
- To provide a set of resource guides to assist novice and experienced multigrade teachers in improving the quality of instruction

However, because of the complexity of multigrade instruction and the vast amount of research on effective classroom instruction, this handbook can only serve as a starting point for those educators wanting to learn new skills or refine those they already possess.

Each book of the series presents information, strategies, and resources considered important for the multigrade teacher. While all the books are related, they also can stand alone as separate documents. For example, the books on Classroom Organization (Book 2) and Classroom Management and Discipline (Book 3) contain overlapping information. Ideally, these two books are best utilized together. The same is true of the books on Instructional Organization, Curriculum, and Evaluation (Book 4) and Instructional Delivery and Grouping (Book 5). Wherever possible, these relationships have been noted in the appropriate books.

In conclusion, the series of books has been designed to be used as a research-based resource guide for the multigrade teacher. It covers the most important issues the multigrade teacher must address to be effective in meeting the needs of students. Sample schedules, classroom layouts, resource lists, and strategies aimed at improving instruction have been used throughout. It is our hope that the handbook will raise questions, provide answers, and direct the multigrade teacher to resources where answers to other questions can be found.

# Participants in the Multigrade Conference

---

**Kalistus Ngirturong**

*Aimeliik Elementary*  
Babeldaob Island  
Republic of Palau

**Robin Lovec**

*Springdale School*  
Springdale, Montana

**Anthony Moorow**

*Yap Department of Education*  
Colonia, Yap

**Cheryl Mikolajczyk**

Kaumakakai, Hawaii

**Leslie Gordon**

*Pitkas Point School*  
St. Mary's, Alaska

**James Makphie**

Majuro, Marshall Islands

**Edith Nicholas**

*Andrew K. Demoski School*  
Nulato, Alaska

**Benjamin Bernard**

Majuro, Marshall Islands

**Linda Pelroy**

*W.W. Jones Elementary*  
Arock, Oregon

**John Rusyniak**

*Mentasta Lake School*  
Mentasta Lake, Alaska

**Patricia Reck**

*Brothers School*  
Brothers, Oregon

**Bill Radtke**

*English Bay School*  
English Bay, Alaska

**Phil M. Gillies**

*Stone Elementary*  
Malad, Idaho

**Carol Spackman**

*Park Valley School*  
Park Valley, Utah

**Barbara Robinson**

*Arbon Elementary School*  
Arbon, Idaho

**Monte Phoenix and Karrie Phoenix**

Orovada, Nevada

**Joel Anderson**

*Onion Creek Elementary*  
Colville, Washington

**Marty Karlin**

*Trinity Center School*  
Trinity Center, California

**Troy Smith**

*Dixie Elementary School*  
Dixie, Washington

**Jill Bills**

*Sanders Elementary School*  
Sanders, Arizona

**Darci Shane**

*Southview School*  
Vida, Montana

**Eileene Armstrong**

*Melrose Elementary*  
Melrose, Montana

**Pam Cunningham**

*Sand Springs Elementary*  
Sand Springs, Montana

**Jennifer McAllister**

*Deerfield Elementary*  
Lewistown, Montana

**Kimberly Rindal**

*Ayers Elementary*  
Grass Range, Montana

**Sammy Vickers**

*Grant Elementary*  
Dillon, Montana

**Brian Wolter**

*Avon Elementary*  
Avon, Montana

# Introduction

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In contrast to a historical pattern of children developing within an age-varied social system, many children today spend a majority of their time in an age-segregated milieu (Katz, Evangelou, & Hartman, 1990; McClellan, 1994). The results of this pattern of segregation are thought to contribute to a declining social support system and compromised development of children's social and academic skills.

Coleman (1987) suggests the need for a significant institutional and societal response to support functions traditionally filled by the family, such as the development of feelings of belonging and community, emotional and social bonding, and nurturance. Increasingly, the school has been viewed as one of the most effective and efficient contexts to address children's academic, affective, and social needs before these needs reach crisis proportions.

A growing body of research explores the influence of educational contexts on children's development. While interest has focused on the impact of the classroom environment on children's attitudes toward school, cognitive growth, and academic development, less direct attention has been given to the relationship between classroom context (including the structure and content of children's peer relationships) and academic and social development during the elementary years. One approach explored by theoreticians and researchers for encouraging children's academic and social skill development is multigrade instruction.

In multigrade instruction, children of at least a two-year grade span and diverse ability levels are grouped in a single classroom and are encouraged to share experiences involving intellectual, academic, and social skills (Goodlad & Anderson, 1987; Katz et al., 1990; McClellan & Kinsey, 1996). Consistency over time in relationships among teachers, children, and parents is viewed as one of the most significant strengths of the multigrade approach because it encourages greater depth in children's social, academic, and intellectual development. The concept of the classroom as a "family" is encouraged, leading to expansion of the roles of nurturing and commitment on the part of both students and teacher (Feng, 1994; Hallion, 1994; Marshak, 1994).

The potential academic and social implications of the multigrade concept of education are strongly supported by extensive research demonstrating the importance of peers in children's academic and social development, and by studies of reciprocity theory, which demonstrate the positive effect on child academic and social behavior of sustained close relationships between children and caregivers (Kinsey, 1998; Maccoby, 1992).

The adequate implementation of a multigrade approach to education extends beyond simply mixing children of different grades together. A positive working model of a multigrade classroom allows for the development of academic and social skills as the teacher encourages cross-age interactions through tutoring and shared discovery. Social competence develops

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for older children out of their roles as teachers and nurturers, and for younger children out of their opportunity to observe and model the behavior of their older classmates (Katz et al., 1990; Ridgway & Lawton, 1969).

The multigrade classroom has traditionally been an important and necessary organizational pattern of education in the United States, notes Miller (1993). Multigrade education dates back to the one-room schools that were the norm in this country until they were phased out in the early part of the 1900s (Cohen, 1989; Miller, 1993). From the mid-1960s through mid-1970s, a number of schools implemented open education, ungraded classrooms, and multigrade groupings. Although some schools continued to refine and develop the multigrade concept, many of these programs disappeared from public schools. With the beginning of the industrial revolution and large-scale urban growth, the ideal of mass public education took root and the practice of graded schools began in earnest.

The graded school system provided a means of organizing and classifying the increased number of urban students of the 1900s. Educators found it easier to manage students by organizing them into age divisions or grades. Other factors, such as the advent of the graded textbook, state-supported education, and the demand for trained teachers, further solidified graded school organization (Miller, 1993; Uphoff & Evans, 1993). Critics of the graded school were quick to emphasize this deficiency. The realization that children's uneven developmental patterns and differing rates of progress are ill-matched to the rigid grade-level system has resulted in a growing interest in and study of the potential benefits of multigrade education in recent years (Miller, 1996). This growing interest is due to a greater focus on the importance of the early years in efforts to restructure the educational system (Anderson, 1993; Cohen, 1989; Stone, S.J., 1995; Willis, 1991) and an awareness of the limitations of graded education.

The multigrade classroom is labor intensive and requires more planning, collaboration, and professional development than the conventional graded classroom (Cushman, 1993; Gaustad, 1992b; Miller, 1996). Sufficient planning time must be available to meet the needs of both teacher and students. Insufficient planning, staff development, materials, support, and assessment procedures will have an impact on the success of the multigrade program (Fox, 1997; Miller, 1996; Nye, 1993).

Despite these constraints, there are special advantages to multigrade classrooms. Flexible schedules can be implemented and unique programs developed to meet students' individual and group interests and needs. Combined classrooms also offer ample opportunity for students to become resourceful and independent learners. The multigrade rural classroom is usually less formal than the single-grade urban or suburban classroom. Because of the small class size, friendly relationships based on understanding and respect develop naturally between the students and the teacher. In

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this setting, students become well-known by their teacher and a family atmosphere often develops.

However, many teachers, administrators, and parents continue to wonder whether multigrade organization has negative effects on student performance. For most rural educators, multigrade instruction is not an experiment or a new educational trend, but a forceful reality based on economic and geographic necessity. In a society where educational environments are dominated by graded organization, the decision to combine grades is often quite difficult. The Rural Education Program of the Northwest Regional Educational Laboratory receives numerous requests from rural educators with two overriding concerns regarding multigrade classrooms:

- What effect does multigrade instruction have on student performance?
- What kind of preparation or training is needed to be an effective teacher in a multigrade classroom?

This handbook will provide answers to these questions and develop an overview of key issues facing school districts and teachers involved in or contemplating multigrade classrooms.



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# What Is Peer Tutoring?

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**O**utside of school, children learn from one another as a natural occurrence in daily life. A child having difficulty baiting a fishhook, building a birdhouse, baking a cake, or understanding model airplane directions will often rely on a brother, sister, or friend for instruction, which usually involves both demonstration and explanation. In such situations, peer tutoring is taking place.

Peer tutoring is cooperation between two or more students, where one individual imparts knowledge to the other(s). This can occur between students of the same age or grade (same-age tutoring) or between students of different ages or grades (cross-age tutoring). For example, when one student helps another student to learn math facts, we can say peer tutoring has taken place. This may be a sixth-grade student helping a first-grader or two first-graders tutoring each other.

In the traditional single-grade classroom, peer tutoring may occur on an incidental basis as when one student seeks help with a math problem from his or her neighbor. In the multigrade classroom, this incidental tutoring is an encouraged and necessary instructional activity. Research evidence specifically focusing on incidental tutoring in multigrade classrooms is nonexistent. However, research on structured tutoring programs is abundant and overwhelmingly positive. Therefore, greater emphasis will be placed on structured tutoring. In addition, information collected from interviews and discussions with multigrade teachers supports the belief that underlying successful incidental tutoring are principles of effective instructional practice. This book of the multigrade series will describe both incidental and structured approaches to tutoring, paying special attention to those characteristics deemed successful by teachers and researchers.

## Incidental Peer Tutoring

**I**n the multigrade classroom, peer tutoring provides the teacher with a powerful strategy for extending the teacher's instructional influence. When teaching two or more different grades in a single classroom, especially when class size pushes above 15 students, the teacher may have difficulty directly responding to individual student needs. Multigrade teachers reporting on their experiences with peer tutoring indicated a strong dependence on students helping one another (Ashland Multigrade Conference in 1989). In nearly all reports, teachers indicated peer tutoring occurred on an incidental basis. That is, tutoring was not generally a systematically planned activity. As Carol Spackman, who teaches grades 4–8 in rural Utah, points out, "Peer tutoring at [my school] is usually spontaneous." Spackman describes several examples:

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- [Jerry] is a very low achiever. His interest span is very low and he completes very little work without help from someone. [Sarah] finishes her work quickly so I ask her to let [Jerry] read to her for 10 minutes a day.
  - [I also have students] work out problems together. (How do we do this math problem?)
  - Have two students sit side by side with a newspaper and circle prepositions. The first [student] will circle three and then have the other [student] circle three. Each student watches closely to make sure the learner is correct.

The four teachers at the Ashland Multigrade Conference in Oregon who participated in the peer tutoring workgroup developed a set of case examples of how they used peer tutoring in their classrooms. A fictitious student named Joe is followed through a day in his multigrade school:

*English is Joe's first subject of the day. The class has been assigned to learn the definition of a noun and write 10 examples. Joe confuses nouns and verbs, so Amy has been assigned to go outside with Joe and gather 10 things that are nouns. She is to demonstrate, for example, why he cannot pick up a "jump" or a "run," but that rocks and sticks are objects, and therefore, nouns.*

*Next is math. Joe is struggling with simple addition. He and Bob are going to a quiet corner with a container of bottle caps. Using these concrete objects, Bob will demonstrate simple addition to Joe, then assist Joe in working his own problems.*

*The next opportunity for peer tutoring for Joe is P.E., but with the roles reversed. A young student is having difficulty doing proper pushups, an exercise Joe is very good at. Joe is asked to demonstrate a proper pushup, then offer tips in helping the younger student. Joe's self-esteem is really boosted by being the "teacher," and he takes his task very seriously.*

*During spelling the class is divided into pairs for an individualized spelling program. Joe quizzes his partner on his word list. The words are checked for spelling errors, then the roles are reversed.*

These multigrade teachers indicated that peer tutoring need "not be planned in the sense of being written in the plan book, but is part of a good teacher's mental arsenal of methods to help students." It is worth noting that these teachers each had several years of experience in the multigrade classroom. As successful multigrade teachers, they learned through experience to capitalize on the capabilities of their students to help one another. Seven different uses of peer tutoring in their classrooms were identified:

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1. Drill each other—spelling, math, and so forth.
  2. Help other students develop a skill that the tutor possesses
  3. Build self-esteem of the tutor
  4. Peer modeling of skills—pushups, songs, dancing, and so forth.
  5. Ask a student to explain a concept in “kid language”
  6. Let a student (or students) teach a chapter in social studies
  7. Help each other with study skills and researching

In addition, the teachers identified a set of instructions that would be helpful for the tutor to follow:

- Smile.
- Be friendly.
- Speak clearly.
- Keep your voice to a whisper or whatever volume is appropriate.
- Answer in a positive way. If the child makes a mistake, don't say things like, “wrong” or “no, that isn't right” or “dummy.” Instead say, “That's almost correct. Now listen while I repeat the word, and then you repeat it after me.”
- Acknowledge correct work with a “that's right,” “good job,” or some other positive statement or positive gesture.

## Structured Tutoring

**A**lthough the incidental tutoring described by the multigrade conference participants was described as “spontaneous” and “not something placed in the teacher's lesson plan book,” it still has an element of structure. But the structure is based on years of classroom experience, where the teacher operates from a “good teacher's mental arsenal of methods to help students.” In other words, these teachers are able to match the needs of different students and apply an appropriate tutoring strategy in a spontaneous manner. However, when novice teachers enter the multigrade classroom, they generally do not have the advantage of years of experience. For these teachers, research-based guidelines for tutoring may prove to be valuable.

# What Tutoring Conditions Produce the Greatest Success?

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**S**everal features of peer tutoring have the greatest effect on student achievement and attitude.

1. Structured tutoring is more effective than tutoring on an incidental basis.
2. Tutoring of shorter (zero to four weeks) duration appears to produce the best results. When tutoring continues past four weeks, there is a diminishing return.
3. Tutoring where lower level skills are taught and tested produces the best student outcomes.
4. Greater results occur in math, followed by reading, than in other subject areas.

In using these results, remember that these conditions should not be viewed too narrowly or as absolutely necessary for successful peer tutoring. A large body of research on tutoring suggests that any organized and focused tutoring program will likely have a positive impact on student learning (see research reviews by Bartz & Miller, 1991; Cohen, Kulik, & Kulik, 1982; Gaustad, 1993). The type of tutoring program used should always be closely monitored to determine if desired changes in the learner are occurring and, if not, the likely causes. Because rural multigrade classrooms are often more informal than single-grade classrooms, tutoring activities may be implemented in a less structured, more spontaneous way.

# What Makes Peer and Cross-Age Tutoring Effective?

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**C**hildren have certain advantages over adults in teaching peers. They may more easily understand tutees' problems because they are cognitively closer. Allen and Feldman found that third- and sixth-graders were more accurate than experienced teachers in determining from nonverbal behavior whether agemates understood lessons (cited in Cazden, 1986; Gartner & Riessman, 1993; Hedin, 1987). The fact that their "cognitive framework" is similar may also help peer tutors present subject matter in terms their tutees understand.

Peer tutors can effectively model study skills such as concentrating on the material, organizing work habits, and asking questions. Cohen notes that similarity between model and learner increases the influence of modeling. An at-risk child may more easily identify with a student relatively close in age, particularly one of the same ethnic or social background, than with an adult. Higher status also promotes the effect of modeling. Cross-age tutoring takes advantage of the higher status inherent in the age difference while still retaining considerable similarity.

Tutors who have struggled academically may be more patient and understanding than those who haven't. Empathy contributes greatly to low achievers' effectiveness as cross-age tutors. Tutors often "pick up on things teachers weren't able to" because they experienced similar problems a few years earlier (Giesecke, Cartledge, & Gardner, 1993).

# How Do Student Tutors Benefit From Tutoring?

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1. Tutors benefit academically from the time spent reviewing and practicing material with their tutees. Tutors may also experience higher cognitive gains. Organizing material to teach “facilitates long-term retention, as well as aiding in the formation of a more comprehensive and integrated understanding” (Cohen, 1986). Tutoring also provides opportunities to practice and improve communication skills and work habits.
2. Tutors’ self-esteem rises as they see their tutees improve. Knowing they are making a meaningful contribution is a powerful experience. Many tutors stop skipping classes and behaving disruptively after they realize they are role models for their tutees (Gaustad, 1992a).

# What Problems Are Commonly Encountered?

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**S**imply putting two students together won't result in successful tutoring. Untrained tutors, whether adults or students, may resort to threats of punishment and scornful put-downs. Tutors need training to master effective tutorial and communication skills.

Another potential problem is that student tutors may not completely understand the material to be taught. Cohen suggests assessing potential tutors' comprehension before assigning them to tutor. However, a tutor need not be an excellent student, especially in the case of cross-age tutoring. "A sixth-grader operating at a fourth-grade level can be an excellent helper of a second-grader who is also operating below grade level," Foot, Shute, Morgan, and Barron (1990) point out.

1. One drawback of peer tutoring is that tutees, often labeled as less capable than tutors, tend to resist being tutored by agrades.
2. Scheduling is a challenge with cross-age tutoring because it requires coordinating the schedules of two sets of students. Offering tutoring as a credit class gives tutors a predictable block of time. However, one period may not provide enough time if tutors and tutees attend schools some distance apart. Cardenas, Harris, del Refugio Robledo, and Supik (1991) found that many schools were unwilling to cope with the logistical problems of cross-age tutoring, despite its effectiveness. He designed the self-contained Companion Reading Program in response to this problem.

# What Elements Are Necessary for a Successful Program?

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**T**he design of a tutoring program is dictated by its objectives, including the targeted age group and subject area, and by the availability of human, physical, and financial resources.

Establishing specific, measurable objectives permits assessment of individual progress and evaluation of the program's success as a whole. Frequent assessment of student progress gives program staff feedback on the effectiveness of lessons and encourages both tutor and tutee (Jenkins & Jenkins, 1987).

Procedures must be established for selecting and matching tutors and tutees. Examples of tutee selection criteria include test scores and teacher judgment. Tutors may be screened for desired attitudes or levels of academic competence. The Valued Youth Program, which recruits students who meet state at-risk criteria, accepts those with records of minor disciplinary problems but draws the line at criminal behavior.

Tutors also may be given basic training to accompany carefully structured materials, as in the Companion Reading Program, or extensive training that enables them to make more independent decisions. Extensive training is desirable when tutor progress is the main objective.

Tutors need ongoing supervision and support. Younger tutors will require more structure and closer supervision. In periodic group meetings, older tutors gain psychological support by talking about frustrations and sharing success stories. Tutors can learn from each other's experiences as well as from staff suggestions for handling problems.

Support by teachers and administrators is essential for a tutoring program to succeed in the long run. Foot, et al., (1990) list typical problems and concerns and recommend openly discussing them beforehand. Parents and the community should also be informed. Teachers who understand and believe in a program's potential to help their children will generally be firm supporters.

Decades of research have established that well-planned peer tutoring programs can improve student achievement and self-esteem as well as overall school climate. The wide variety of programs available should enable every interested school district to find a format that suits its needs.



# Developing a Peer Tutoring Program in Your Classroom

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**B**efore a tutoring program is implemented, six important question areas need to be reviewed and answered. Without some idea of where you want to go and how you plan to get there, your chances of ever arriving are slim. The following questions will serve as a planning guide. You will also find a checklist consisting of questions and statements that will be helpful in thinking about what you should do. The checklist is divided into sections that focus on selecting students, deciding where tutoring will take place, scheduling, choosing materials and strategies, and evaluation.

## Setting Goals and Choosing Learning Objectives

**I**t is important that you specify the goals of your tutoring effort. What do you want to happen as a result of tutoring? Do you want to improve student performance in math or reading? Do you want to develop student self-direction and responsibility? Do you want to improve tutor self-esteem? Do you simply want to better manage the many different age levels of your multigrade classroom? Successful peer tutoring may have positive effects on many different areas at the same time, but the important thing is to be clear on your primary purpose for using tutoring. Begin planning your tutoring program by writing down a few goals you would like to achieve. To help you write your own tutoring goals, several examples follow:

- Peer tutoring will be used in my classroom to increase achievement and on-task time in math for first- and second-graders
- Peer tutoring will be used during oral reading to increase student fluency and motivation
- Peer tutoring will be used to help students perform better on spelling quizzes

Notice that each goal consists of two common elements: (1) who will receive the tutoring (first- and second-graders, all reading students, those performing poorly), and (2) what the tutoring will focus on (math achievement, on-task time, reading fluency, motivation, and poor spelling performance). In deciding your goals, be sure to include these two elements.

Equally important is establishing specific objectives (learner outcomes) for each tutoring pair or group that can be easily assessed. The following example illustrates how to establish a goal and an objective for tutoring:

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*Mrs. M decided to start a tutoring program to help Michael because he was performing poorly in division. Michael understood how to complete the problems, but his accuracy was worse and speed was much slower than other students. Mrs. M determined that Michael did not know basic multiplication facts. He continually used his fingers. Mrs. M decided to use Bill as a tutor. He got along well with other students and could be counted on to follow through on activities or tasks he started. Mrs. M described what Michael needed to learn.*

**Michael's learning objective**

Michael will learn his times tables through the 4's so that he can finish a mixed-facts worksheet in two minutes without missing more than five problems.

Mrs. M wrote the learning objective so that it could be easily understood by Bill and Michael. Note that the objective has several important elements:

1. It is based on the student's classroom learning needs.
2. It is clear and easy for both the tutor and learner to understand.
3. It is easy to measure.

Remember, in developing plans, be sure you know why you want to use peer tutoring (tutoring goals) and what specific objective (learner outcome) tutoring pairs or groups will work on.

## Deciding Who Will Be Involved in Tutoring

**T**he selection and matching of tutor and learner is an important task. Topping (1988) identifies 10 crucial areas when considering who should participate in tutoring. These areas will help guide you in making decisions regarding student participation. Each area is designed to be used for both the tutor and the learner.

1. How will students be selected?
  - Will you ask students or other teachers?
  - Will you observe the students?
2. What level of students will be tutored?
  - Will you select same-grade/-age tutors, cross-age tutors, or both?
  - What are the advantages and disadvantages of either approach?

- 
3. What kind of academic skills will the tutor have?
    - Will you select tutors with higher-than-average scholastic ability?
    - Will you select students with below-average ability in order to help them develop their skills?
    - Will you select students with the same scholastic ability?
  4. Have you thought about student relationships?
    - How will you deal with existing positive or negative relationships among students?
    - How will you deal with weak and strong personalities?
  5. Have you considered the number of students to be tutored?
    - Will you begin with tutor-learner pairs or small groups?
    - How large will the groups be?
    - How many tutors can you effectively monitor?
  6. Have you considered student characteristics?
    - How independent and responsible is the student?
    - What are student work habits like?
    - How cooperative is the student?
    - Does the student get along well with others?
  7. How much consideration do you want to give to student preferences?
    - How much will students have to say about who they work with?
    - Will you have male-female pairs or only pairs of the same sex?
    - Will you mix pairings by culture or race? (Your knowledge of student working relationships and cultural backgrounds will be helpful.)
  8. How will you handle tutor absenteeism?
    - Will you have standby tutors to fill in when one of the regular tutors is absent or quits?
    - How many standbys will you have?
    - Will you need to inform parents?
    - How much information do parents in your community need regarding your tutorial program?
    - How will you get information to parents if it is needed?

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10. Do you feel tutors will need special incentives?

- Do you feel it is necessary to reward tutors?
- Should the rewards be extrinsic (e.g., verbal praise, stickers, privileges)?
- Should the rewards be intrinsic (e.g., personal satisfaction)?

## Deciding Where Tutoring Will Take Place

**I**n organizing your classroom for tutoring, you need to consider what else will be going on during tutoring. If you choose to have tutoring occur in pairs during reading time, then the entire room might become a tutoring zone. However, if you have students of several ages in your room at once and you want older students to tutor younger students in math, you may need to designate a special area for tutoring. This may be either in the classroom or outside, depending on available space. Whatever plan you choose, you should have your expectations for behavior clearly understood and tutoring areas well defined.

## Scheduling the Tutoring Sessions

- Will tutoring occur during class time?
- During breaks or recess? After school?
- For what time periods will tutors work?
- Will it be the same time each day, or will the times vary with student need?

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## Deciding What Subjects Will Be Tutored

**O**ral reading, word recognition, decoding, and comprehension?

**Reading**

Tutor drill activities such as basic facts, or work in conceptual areas such as computation or problem solving?

**Math**

Tutor in expressive areas such as creative writing and reporting, or emphasize grammar and mechanics?

**Language**

Will students drill in words or in spelling rules?

**Spelling**

Which curriculum area you choose will be guided by your knowledge of student needs, available materials and, ultimately, the success of the tutor. Generally, there are two possible directions you may choose.

First, you may choose to focus on an academic content area such as math, where the tutor helps a student learn basic addition facts or assists the teacher in reinforcing how to add numbers. Or you may choose to focus on open-ended learning, where the tutor provides help to younger students who may need a combination of supervision and tutoring in order to complete an activity.

For example, if the teacher asks the primary grades to complete a series of plant activities in science that include planting a seed, collecting and labeling leaves, and making a plant scrapbook, older students might help the primary children in completing these tasks. The difference between academic content and open-ended learning centers on the openness of the tasks. In the first case there are clearly right and wrong answers, while in the second case the end results may be quite different for each student. In addition, open-ended learning places greater emphasis on supervision and support than does a focus on convergent academic tasks (i.e., where there is only one correct answer).

Remember, whatever curricular area you choose will be determined by what you want to accomplish in tutoring and the needs of students.

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## Deciding on Tutoring Materials, Procedures, and Strategies

**W**hen deciding how tutoring will take place, several key areas need to be addressed: materials, tutoring strategies, tutor training, monitoring/feedback, and evaluation. Using a list adapted from Topping (1988), each of these areas is outlined below:

<b>Materials</b>	<b>1. Structure</b>	<ul style="list-style-type: none"><li>● Will materials be highly structured and sequenced or open-ended?</li><li>● Who will prepare structured materials, or can existing materials be used?</li></ul>
	<b>2. Difficulty</b>	<ul style="list-style-type: none"><li>● Will level of difficulty be controlled by materials?</li><li>● Will the skill level of the tutor limit difficulty?</li></ul>
	<b>3. Choice</b>	<ul style="list-style-type: none"><li>● Will the tutor and learner have choices in the materials used?</li><li>● Will they have a choice in how the materials will be used?</li><li>● Will the teacher decide on both materials and strategies?</li></ul>
	<b>4. Sources</b>	<ul style="list-style-type: none"><li>● What materials are available and where can they be obtained?</li><li>● Will materials have to be teacher-made?</li><li>● Will tutors be allowed to make their own materials?</li></ul>
	<b>5. Storage</b>	<ul style="list-style-type: none"><li>● Where will materials be stored?</li><li>● Who will have access to them: Tutor? Learner?</li></ul>
	<b>6. Progression</b>	<ul style="list-style-type: none"><li>● Who will determine when the learner should progress to the next activity, materials, or skill?</li></ul>
<b>Tutor training (Keep it brief)</b>	<b>1. Expectations</b>	<ul style="list-style-type: none"><li>● Will you model or role play how to tutor?</li><li>● How will you convey the importance of being positive and supportive in the tutoring relationship?</li><li>● How will you make your expectations for behavior clear?</li><li>● Will tutoring procedures (schedules, using materials, etc.) be in writing?</li></ul>

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	<ul style="list-style-type: none"> <li>• How often will you meet to work with tutors and provide feedback on their performance?</li> </ul>	
<b>1. Packaged approach</b>	<ul style="list-style-type: none"> <li>• Will tutoring strategies be specified by the choice of materials or organization, such as SRA Instructional Kits, DISTAR Direct Instruction, cooperative learning, reading text, or workbooks?</li> </ul>	<b>Tutoring approaches and strategies</b>
<b>2. Drill and practice</b>	<ul style="list-style-type: none"> <li>• Will you emphasize the importance of varying activities in order to increase learner motivation?</li> </ul>	
<b>3. Correction procedures</b>	<ul style="list-style-type: none"> <li>• Will correction procedures be clear and simple? The tutor needs to either know the correct answers or where they may be found (e.g., answer sheets provided by the teacher).</li> </ul>	
<b>4. Praise</b>	<ul style="list-style-type: none"> <li>• Will tutors be shown how to correct verbal responses?</li> <li>• How will tutors know how often to give praise and what to say (“ok,” “good,” “you’re doing great,” etc.)?</li> <li>• Will tutors be shown how to give both verbal and nonverbal praise in a genuine manner?</li> <li>• Will tutors know how to avoid criticism and sarcasm, either in tone of voice or in words?</li> </ul>	
<b>5. Social</b>	<ul style="list-style-type: none"> <li>• Will tutors understand how to establish rapport by relationship, sharing interests, demonstrating concern, and so forth?</li> </ul>	
<b>1. Methods</b>	<ul style="list-style-type: none"> <li>• Will you hold group discussions with the tutors? Learners?</li> <li>• Will you directly observe the tutor-learner process (most revealing method)? What will you look for if you observe?</li> <li>• Who else might observe and give you feedback?</li> </ul>	<b>Monitoring/feedback</b>
<b>2. The process</b>	<ul style="list-style-type: none"> <li>• Are the tutoring sessions occurring on schedule?</li> <li>• Are the materials being used appropriately?</li> <li>• Are the tutor and the learner working well together, without friction?</li> </ul>	

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### **3. Tutoring**

- Was the tutor prepared for the lesson?
- Were materials ready?
- Did the tutor understand what was being taught?
- Did the tutor give clear directions?
- Did the tutor use negative reinforcement?
- Did the tutor use frequent positive reinforcement?
- Did the tutor actively involve the learner in the lesson?
- Was the tutor enthusiastic?
- Did the tutor keep the learner on task?
- Did the learner appear interested in the lesson?
- Did the learner complete the lesson?

### **4. The tutor**

- Will tutors be responsible for keeping track of the learner's progress?
- If so, how will this be done (chart, workbook, graph, etc.)?
- Will the tutor be responsible to report progress to the teacher?
- If so, how often and in what form?



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## Evaluation

**E**valuation is an essential part of tutoring. How will you know if you have achieved your goals unless you have some form of assessment? Your evaluation should reflect your program goals. If you said you wanted to use peer tutoring to increase student fluency and motivation in reading, how would you know if this goal had been achieved? Do students who received tutoring read more fluently now than when they began tutoring? Do they act more motivated by checking out more books, volunteering to read during oral reading activities, or choosing reading during free time?

The following list will provide you with some possible sources of information to help you assess the effect tutoring has had in your classroom:

- Interview learners
- Review textbook testing materials
- Observe learners and note changes in behavior
- Standardized testing
- Talk to the tutor
- Talk to parents
- Make up a test or use workbook pages

# Conclusion

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**P**eer tutoring has been shown to improve student performance for the tutor and the learner in a number of important areas such as self-esteem, academics, and motivation. In the multigrade classroom, tutoring has a history of extending the teachers' instructional influence. However, tutoring often appears to be a rather spontaneous, informal activity.

Information presented by multigrade conference participants indicates both purpose and structure. Because there are so many time demands placed on multigrade teachers, it is critically important to remember to keep it simple and collect only what you need in order to make decisions regarding program change.

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# Resources

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Ashley, W., Zahniser, G., Jones, J., & Inks, L. (1986). *Peer tutoring: A guide to program design*. Columbus, OH: National Center for Research in Vocational Education. (ERIC Document Reproduction Service No. ED 268 372)

This publication presents guidelines for planning, implementing, and evaluating a peer tutoring program. Benefits, guidelines, and suggestions with examples for peer tutoring are presented. Resource materials and sample forms have also been included.

Available from:                      National Center for Research in Vocational  
Education  
1960 Kenny Road  
Columbus, OH 43210

Greenwood, C.R. (1991). Classwide peer tutoring: Longitudinal effects on the reading, language, and mathematics achievement of at-risk students. *Journal of Reading, Writing, and Learning Disabilities International*, 7(2), 105-123.

This article describes how Classwide Peer Tutoring (CWPT) puts effective instructional variables into practice and how it improves academic achievement. The effective instructional variables CWPT utilizes are engaged time, time-management success rate or successful completion of tasks, academic learning time, monitoring, structuring, and questioning. It also reports findings that CWPT, when systematically applied to oral reading, spelling, and arithmetic facts, increased students' performance on standardized measures of reading, language, and mathematics. It discusses two CWPT drawbacks: first, that most of the evidence of its effectiveness is in the realm of acquisition of rote skills and, second, that the content for tutoring sessions must be developed or adapted by the teacher.

Available from:                      ERIC Clearinghouse on Educational  
Management  
5207 University of Oregon  
Eugene, OR 97403-5207

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Gartner, A., & Riessman, F. (1993, August). *Peer tutoring: Toward a new model. ERIC Digest*. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.

This article describes a study funded by the Kellogg foundation in which six New York high schools were sites for reciprocal tutoring. Describes reciprocal tutoring, which may be either cross-age or within grade (with roles of tutor and tutee alternated).

Available from: ERIC Clearinghouse on Educational Management  
5207 University of Oregon  
Eugene, OR 97403-5207

Hertz-Lazarowitz, R., & Miller, N. (Eds.). (1992). *Interaction in cooperative groups: The theoretical anatomy of group learning*. New York, NY: Cambridge University Press.

This publication discusses tutoring concepts and developing a tutoring program for your classroom. A detailed bibliography is also included.

Available from: ERIC Clearinghouse on Educational Management  
5207 University of Oregon  
Eugene, OR 97403-5207

Miller, L., Kohler, F.W., Kohler, H.E., Hoel, K., & Strain, P.S. (1993). Winning with peer tutoring: A teacher's guide. *Preventing School Failure*, 37(3), 14-18.

This article briefly reviews positive academic outcomes and social benefits of peer tutoring and describes a systematic process for teachers to use to plan, implement, and maintain a peer tutoring intervention.

Available from: ERIC Clearinghouse on Educational Management  
5207 University of Oregon  
Eugene, OR 97403-5207

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Thorkildsen, T.A. (1993). Those who can, tutor: High-ability students' conceptions of fair ways to organize learning. *Journal of Educational Psychology*, 85(1), 182-190.

The author investigates high-ability and comparison students' views of the relative fairness of acceleration for faster learners, peer tutoring, faster students waiting for slower students to catch up, faster learners setting the pace for instruction, and enrichment for faster learners. Judged fairest was abler students tutoring the less able.

Available from:               ERIC Clearinghouse on Educational  
  Management  
  5207 University of Oregon  
  Eugene, OR 97403-5207

Topping, K. (1988). *The peer tutoring handbook: Promoting co-operative learning*. Cambridge, MA: Brookline Books.

This book discusses the history of tutoring, how to organize and implement a program, effectiveness of research, and how to evaluate a project.

Available from:               ERIC Clearinghouse on Educational  
  Management  
  5207 University of Oregon  
  Eugene, OR 97403-5207